

<div style="text-align: center;">

[MENUJU AKHIR]</div><div style="text-align: center;"> </div>

<div style="text-align: center;">SMART SMOKING ROOM
</div><div style="text-align: center;">
</div>

<center>

<div style="background-color: white; border: 2px dashed rgb(23, 128, 221); height: 240px; overflow: auto; padding: 10px; text-align: center; width: 330px;">

DAFTAR ISI

<div style="text-align: left;">

1. Tujuan</div>

<div style="text-align: left;">

2. Alat dan Bahan</div>

<div style="text-align: left;">

3. Dasar Teori</div>

<div style="text-align: left;">

4. Percobaan</div><div style="text-align: left;">

</div>

<div style="text-align: left;">

5. File Download</div><div style="text-align: left;">

</div>

</div>

</center>

<div style="text-align: justify;">

1. Tujuan [Kembali]</div><div style="text-align: justify;"><div><ul style="text-align: left;">Memahami penggunaan encoder dan decoderMampu membuat rangkaian dengan pengaplikasian encoder dan decoder</div></div><ul style="background-color: white; color: #222222; line-height: 1.4; margin: 0.5em 0px; padding: 0px 2.5em;"><ul style="background-color: white; color: #222222; line-height: 1.4; margin: 0.5em 0px; padding: 0px 2.5em;"><div style="text-align: justify;">

2. Alat dan Bahan [Kembali]</div>
<div>A. Alat</div><div><b style="background-color: white; color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">
</div><div><p class="MsoNormal" style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: arial; text-align: left;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">1. Power Supply</p><p class="MsoNormal" style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: arial;"></p><div class="separator" style="background-color: white; clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: arial; text-align: center;"></div><br style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /><span
style="background-color: white; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: arial;
line-height: 18.4px;"><br style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /><p
style="background-color: white; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family:
arial;"></p><p class="MsoNormal" style="background-color: white; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: arial;"><br
</p><p class="MsoNormal" style="background-color: white; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family:
arial;"><span face=""Arial";"sans-serif"" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height: 18.4px;"><b
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">2. Voltmeter
DC</p><p class="MsoNormal" style="background-color: white; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family:
arial;"></p><div class="separator" style="background-color: white; clear: both; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: arial;
text-align: center;"><a
href="https://1.bp.blogspot.com/-WourFTH-vAI/YCp1dkbreAI/AAAAAAAAACJo/w9vzzMisQtQFY-MEFvgvSKA
AisurZrfZQCLcBGAsYHQ/s225/voltmeter%2Bdc.jpg" style="color: #1a8e57; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin-left: 1em;
margin-right: 1em; text-decoration-line: none;"></div><span style="background-color: white; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),

url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: arial;
line-height: 18.4px;"><br style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" />
<p
class="MsoNormal" style="background-color: white; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: arial;
text-align: left;"><span face=""Arial";"sans-serif"" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height:
18.4px;">3. B<b style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size:
15.4px;">aterai </p></div><div><div style="background-color:
white; color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: left;"><span
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><div style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align:
center;"><span style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><h3 style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin: 0px; position:
relative;"><span style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 400;"><div
style="text-align: left;"><p class="MsoNormal" style="color: #666666; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size:
15.4px;"><span face=""Arial";"sans-serif"" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height:
18.4px;"><span style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"),
auto;"></p><div style="color: #666666; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size:
15.4px;"><span style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><div class="separator"
style="clear: both; color: #222222; cursor:
url("https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGV
NmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9zF-AnS_aARbsx=s0-d"),
url("https://lh5.googleusercontent.com/proxy/8EIJUjO8qqLh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d
4bJdD004i3oYaKrr_t5gLvO3_np6RTsD45RU6244UlfMJuygiq=s0-d"), auto !important; text-align:
center; user-select: text;"><span style="cursor:
url("https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGV
NmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9zF-AnS_aARbsx=s0-d"),
url("https://lh5.googleusercontent.com/proxy/8EIJUjO8qqLh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d

4bJdD004i3oYaKrr_t5gLvO3_np6RTsD45RU6244UlfMJuygiq=s0-d"), auto !important; user-select: text;"> </div><br style="cursor:

[url\("https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGVNmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9zF-AnS_aARbsx=s0-d"](https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGVNmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9zF-AnS_aARbsx=s0-d")),
[url\("https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTSD45RU6244UlFMJuYgiq=s0-d"](https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTSD45RU6244UlFMJuYgiq=s0-d")), auto limportant; user-select:
text;" /><div class="separator" style="clear: both; color: #222222; cursor:
[url\("https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGVNmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9zF-AnS_aARbsx=s0-d"](https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGVNmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9zF-AnS_aARbsx=s0-d")),
[url\("https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTSD45RU6244UlFMJuYgiq=s0-d"](https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTSD45RU6244UlFMJuYgiq=s0-d")), auto limportant; text-align:
center; user-select: text;"><span style="cursor:
[url\("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"](https://ani.cursors-4u.net/games/gam-16/gam1571.ani")),
[url\("https://ani.cursors-4u.net/games/gam-16/gam1571.png"](https://ani.cursors-4u.net/games/gam-16/gam1571.png")), auto;"><span style="cursor:
[url\("https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGVNmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9zF-AnS_aARbsx=s0-d"](https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGVNmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9zF-AnS_aARbsx=s0-d")),
[url\("https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTSD45RU6244UlFMJuYgiq=s0-d"](https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTSD45RU6244UlFMJuYgiq=s0-d")), auto limportant; user-select:
text;"><span style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani");,
[url\("https://ani.cursors-4u.net/games/gam-16/gam1571.png"](https://ani.cursors-4u.net/games/gam-16/gam1571.png")), auto;"><span style="cursor:
[url\("https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGVNmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9zF-AnS_aARbsx=s0-d"](https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGVNmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9zF-AnS_aARbsx=s0-d")),
[url\("https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTSD45RU6244UlFMJuYgiq=s0-d"](https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTSD45RU6244UlFMJuYgiq=s0-d")), auto; user-select:
text;"> <span style="cursor:
[url\("https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGVNmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9zF-AnS_aARbsx=s0-d"](https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGVNmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9zF-AnS_aARbsx=s0-d")),
[url\("https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTSD45RU6244UlFMJuYgiq=s0-d"](https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTSD45RU6244UlFMJuYgiq=s0-d")), auto limportant; user-select:
text;"><span style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani");,
[url\("https://ani.cursors-4u.net/games/gam-16/gam1571.png"](https://ani.cursors-4u.net/games/gam-16/gam1571.png")), auto;">
 <span style="cursor:
[url\("https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGVNmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9zF-AnS_aARbsx=s0-d"](https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGVNmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9zF-AnS_aARbsx=s0-d")),
[url\("https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTSD45RU6244UlFMJuYgiq=s0-d"](https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTSD45RU6244UlFMJuYgiq=s0-d")), auto limportant; user-select:
text;"><span style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani");,
[url\("https://ani.cursors-4u.net/games/gam-16/gam1571.png"](https://ani.cursors-4u.net/games/gam-16/gam1571.png")),
auto;">Gambar Baterai</div><div
class="separator" style="clear: both; color: #222222; cursor:
[url\("https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGVNmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9zF-AnS_aARbsx=s0-d"](https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGVNmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9zF-AnS_aARbsx=s0-d")),
[url\("https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTSD45RU6244UlFMJuYgiq=s0-d"](https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTSD45RU6244UlFMJuYgiq=s0-d")), auto limportant; user-select:
text;"><span style="cursor:

[url\("https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGVNmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9ZF-AnS_aARbsx=s0-d"\);](https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGVNmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9ZF-AnS_aARbsx=s0-d");url("https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTsD45RU6244UlFMJuYgiq=s0-d");)

[url\("https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTsD45RU6244UlFMJuYgiq=s0-d"\);](https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTsD45RU6244UlFMJuYgiq=s0-d");), auto !important; user-select: text;"><br style="cursor:

[url\("https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGVNmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9ZF-AnS_aARbsx=s0-d"\);](https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGVNmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9ZF-AnS_aARbsx=s0-d");)

[url\("https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTsD45RU6244UlFMJuYgiq=s0-d"\);](https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTsD45RU6244UlFMJuYgiq=s0-d");), auto !important; user-select: text;" /></div><span style="color: #222222; cursor:

[url\("https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGVNmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9ZF-AnS_aARbsx=s0-d"\);](https://lh3.googleusercontent.com/proxy/JoJL934uMu5R6QtsXmB5A2YA0gUdZeB5cDqc1BfzGVNmGIGCh4leUN4iE5ZOjFz7saJLQRfzMta4JFWJhk9ZF-AnS_aARbsx=s0-d");)

[url\("https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTsD45RU6244UlFMJuYgiq=s0-d"\);](https://lh5.googleusercontent.com/proxy/8EIJJujO8qqIh_xt4_jt4EK4jUFgAy2NhhfZRptRoq7X0d4bJdD004i3oYaKrr_t5gLvO3_np6RTsD45RU6244UlFMJuYgiq=s0-d");), auto !important; user-select: text;">

</div></div></h3></div></div></div><div>
</div><div>4.

Generator DC</div><div style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani");

[url\("https://ani.cursors-4u.net/games/gam-16/gam1571.png"\);](https://ani.cursors-4u.net/games/gam-16/gam1571.png");), auto; font-size: 15.4px;"><span style="color: #222222; cursor:

[url\("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"\);](https://ani.cursors-4u.net/games/gam-16/gam1571.ani");),

[url\("https://ani.cursors-4u.net/games/gam-16/gam1571.png"\);](https://ani.cursors-4u.net/games/gam-16/gam1571.png");), auto; font-size: x-large;"><div class="separator" style="clear: both; cursor:

[url\("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"\);](https://ani.cursors-4u.net/games/gam-16/gam1571.ani");),

[url\("https://ani.cursors-4u.net/games/gam-16/gam1571.png"\);](https://ani.cursors-4u.net/games/gam-16/gam1571.png");), auto;"><a href="https://1.bp.blogspot.com/-5H3FYG3JoMo/X5J5pmN-m1l/AAAAAAAAQL4/3asNCfJgXPMMWcxkmNoywo46CBgrCnfgCLcBGAsYHQ/s123/Simbol%2BGenerator%2BDC.JPG" style="color: #1a8e57; cursor:

[url\("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"\);](https://ani.cursors-4u.net/games/gam-16/gam1571.ani");),

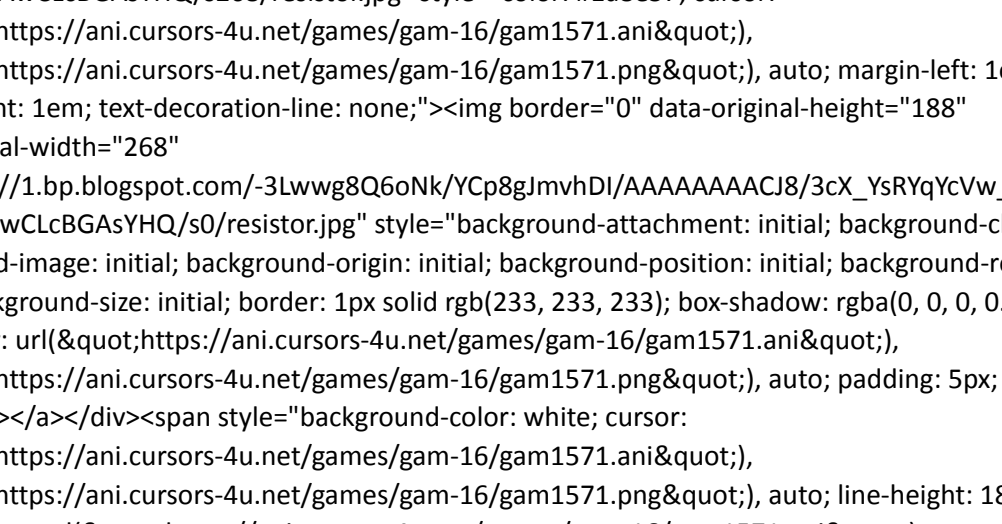
[url\("https://ani.cursors-4u.net/games/gam-16/gam1571.png"\);](https://ani.cursors-4u.net/games/gam-16/gam1571.png");), auto; margin-left: 1em; margin-right: 1em; text-decoration-line: none;"><div class="separator" style="clear: both; text-align: center;"><a href="https://1.bp.blogspot.com/-5H3FYG3JoMo/X5J5pmN-m1l/AAAAAAAAQL4/3asNCfJgXPMMWcxkmNoywo46CBgrCnfgCLcBGAsYHQ/s123/Simbol%2BGenerator%2BDC.JPG" style="color: #1a8e57; cursor:

[url\("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"\);](https://ani.cursors-4u.net/games/gam-16/gam1571.ani");),

[url\("https://ani.cursors-4u.net/games/gam-16/gam1571.png"\);](https://ani.cursors-4u.net/games/gam-16/gam1571.png");), auto; margin-left: 1em; margin-right: 1em; text-decoration-line: none;"></div></div></div><div><div style="background-color: white;"><div style="text-align: justify;">

B. Bahan

Resistor



The image shows a resistor, which is a component used to limit the flow of electrical current in a circuit. It is represented by a zigzag line with a rectangular box in the center. The box contains the text "Resistor".

url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /><b style="background-color: white; color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif;">2. Dioda 1N4001</div><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><b style="background-color: white; color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif;"><div

style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: left;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">3. Transistor NPN BC547</div></div></div></div><div style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"><ul style="color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; line-height: 1.4; margin: 0.5em 0px; padding: 0px 2.5em;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><div class="separator" style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"></div></div></div><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" />
<p

class="MsoNormal" style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;")><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">4. OP AMP LM358</p><div class="separator" style="background-color: white; clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"></div><p class="MsoNormal" style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /></p><div style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">5. Gerbang XOR 4030</div><div class="separator" style="background-color: white; clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"><div class="separator" style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><a href="https://blogger.googleusercontent.com/img/a/AVvXsEhvrBO_Ji5mYGQ1_o4zF6duGtaVmX2Z8pheE9r34eAoDTg3F_f9rE11N1kTqyQ_fzG4jU6vdUSwKSpIv5vh7WJtahIVbgEwqjVO5Q4CdGtJwv9KCCjwPHqQECCg

fdosQvw3M5GtvKZgTdmDUGWXd6kjrPsaASDW7STfUAQ-xHdBWkAG-9A6AGnmBw65vA" style="color: #1a8e57; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin-left: 1em; margin-right: 1em; text-decoration-line: none;"></div><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /></div><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" />6. Gerbang Not
</div><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><div class="separator" style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"></div><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /></div></div><div><div class="separator" style="background-color: white; clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),

url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Georgia, Utopia, "Palatino Linotype"; Palatino, serif; font-size: 15.4px;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">7. POT-HG</div><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><p style="clear: both; color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: arial;"></p><div class="separator" style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"></div></div><div><p class="MsoNormal" style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: bold;">
</p><b style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Georgia, Utopia, "Palatino Linotype"; Palatino, serif; font-size: 15.4px;"><p style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),

url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: 15.4px;"></p><p class="MsoNormal" style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: 15.4px;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">8. Sensor Touch</p><div style="background-color: white; color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; font-size: 15.4px; text-align: center;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"> </div><div style="background-color: white; color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; font-size: 15.4px;">
</div><p style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: 15.4px;"></p><div style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Georgia, Utopia, "Palatino Linotype", Palatino, serif; font-size: 15.4px;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: left;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">9.Sensor Gas MQ2<br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"><div class="separator" style="clear: both; cursor:

url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><a
href="https://1.bp.blogspot.com/-SauEYjYFD9M/X2t8yq5IMII/AAAAAAAAPOY/vNYKQSsdtkcXAz43e2X9tiYV
tzffcg59gCLcBGAsYHQ/s400/GAMBAR%2BSENSOR%2BMQ2%2BYAN%2BBENAR.png" style="color:
#1a8e57; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin-left: 1em;
margin-right: 1em; text-decoration-line: none;"><span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family:
arial;"><span style="color: black; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"></div><span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: arial;"><br
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /><span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><br style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"
/></div>
</div></div></div><div style="background-color: white; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Georgia,
Utopia, "Palatino Linotype", Palatino, serif; font-size: 15.4px;"><span face="arial, sans-serif"
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: arial;"><b
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><br style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"
/></div></div><div>
</div><div>10. LM35</div><div><span
style="font-family: arial;"><div style="background-color: white; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Georgia,
Utopia, "Palatino Linotype", Palatino, serif; font-size: 15.4px;"><div class="separator"
style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),

url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"></div><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" />
</div></div><div><p class="MsoNormal" style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "Times New Roman"; font-size: 15.4px;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">11. Sensor PIR </p><p class="MsoNormal" style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "Times New Roman"; font-size: 15.4px;"></p><div class="separator" style="background-color: white; clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "Times New Roman"; font-size: 15.4px; text-align: center;"></div><br style="background-color: white; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "Times
New Roman"; font-size: 15.4px;" /><p style="background-color: white; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "Times
New Roman"; font-size: 15.4px;"></p></div>
<div><span style="font-family:
arial;"><div style="background-color: white; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Georgia,
Utopia, "Palatino Linotype", Palatino, serif; font-size: 15.4px;"><span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><p class="MsoNormal"
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family:
arial;"><span face="Arial, sans-serif" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height: 18.4px;"><b
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">12. 7 Segment
Anoda</p><p class="MsoNormal" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family:
arial;"></p><div class="separator" style="clear: both; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: arial;
text-align: center;"><a
href="https://1.bp.blogspot.com/-nx7nmVG8brU/YCqfIEJAKBI/AAAAAAAAACPc/AV2GewZleqEQ3ZY2XVgwLl
VBxp3TNI1LgCLcBGAsYHQ/s800/7%2Bsegment.jpg" style="color: #1a8e57; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin-left: 1em;
margin-right: 1em; text-decoration-line: none;"><b style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"></div><p class="MsoNormal" style="cursor:

url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: arial;">
</p><p class="MsoNormal" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family:
arial;"><span face="Arial, sans-serif" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><b style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">13. Decoder (IC
7447)</p><span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><div class="separator"
style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: arial;
text-align: center;"><a
href="https://1.bp.blogspot.com/-u-eyh8sU3BU/YCqmSWysOJI/AAAAAAACQA/gbUURRIDT8ACLRZe7nS
35DyUlaxY4zAClCBGAsYHQ/s225/decoder.jpg" style="color: #1a8e57; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin-left: 1em;
margin-right: 1em; text-decoration-line: none;"></div><p class="MsoNormal" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: arial;"><b
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">14. Encoder (IC
74147)</p><span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><div class="separator"
style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"><b
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><a
href="https://blogger.googleusercontent.com/img/a/AVvXsEgZ3pX3QmtkDOhyPXQ35tnGHuYd1MRnol8w
H0e--9GjplnoxFBBCsU2qMo6ZsoclFFHmvpSMmNBr2aRwJBLACqymT9uZEoGYN2VII-BoAfdztlmcV4fqh-s-yV
2mscFED4uCPvos1MeYDsRABYTR-UCVe7uqYToXe8Plh4yu6XWgAm70bINsXuEJSIV9g" style="color:
#1a8e57; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin-left: 1em;
margin-right: 1em; text-decoration-line: none;"></div><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"); url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");, auto;"><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"); url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");, auto;" />
<p class="MsoNormal" style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"); url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");, auto; font-family: arial;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"); url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");, auto;">15.

Relay</p><div style="color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"); url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");, auto; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; text-align: center;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"); url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");, auto;"><div class="separator" style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"); url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");, auto; font-family: arial; font-weight: bold;"></div></div></div><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"); url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");, auto;"><b style="cursor:

url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: arial;">16.
Motor DC</div><div style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><div class="separator"
style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="color:
#222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: justify;"><div
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial,
Tahoma, Helvetica, FreeSans, sans-serif; font-weight: bold;"><div style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"><div
class="separator" style="clear: both; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><a
href="https://lh3.googleusercontent.com/-RXxlebg1d44/X5AtROwdzEI/AAAAAAAAQJk/30_PATbWe8oUm
6Yg3HXQ4esh4wf1CLH8gCLcBGAsYHQ/image.png" style="color: #1a8e57; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin-left: 1em;
margin-right: 1em; text-decoration-line: none;"></div><br style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /><br style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /></div></div><div
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial,
Tahoma, Helvetica, FreeSans, sans-serif; font-weight: bold;"><br style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /></div><span
style="color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: justify;"><div
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><div class="separator"
style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial,
Tahoma, Helvetica, FreeSans, sans-serif; font-weight: bold;"><div style="clear: both; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),

url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Georgia, Utopia, "Palatino Linotype"; Palatino, serif; font-weight: 400; text-align: left;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /></div><div style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Georgia, Utopia, "Palatino Linotype"; Palatino, serif; font-weight: 400; text-align: left;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">17.

LED</div><p style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 400; text-align: center;"></p></div></div></div><h3 style="color: black; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),

</div>
<div><div style="background-color: white; text-align: center;"><div style="text-align: left;"><div class="MsoNormal"><div class="title"><div class="separator" style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"); url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"); auto; font-size: 15.4px; text-align: center;"><div style="cursor:

```
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;);  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; text-align: start;"><span  
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;);  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto;"><div style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;);  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto;"><div style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;);  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto;"><h4 style="color:  
#222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;);  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; margin: 0px; position:  
relative;"><ul style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;);  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; line-height: 1.4; margin:  
0.5em 0px; padding: 0px 2.5em;"><li style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;);  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; margin: 0px 0px 0.25em;  
padding: 0px;"><span style="color: #303030; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;);  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;);  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;);  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto;">RESISTOR</span></span></li></ul><p class="MsoNormal" style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;);  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;);  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;);  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;);  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; font-weight:  
normal;"><span style="background-attachment: initial; background-clip: initial; background-image: initial;  
background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial;  
cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;);  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; line-height:  
18.4px;">Resistor</span><span style="background-attachment: initial; background-clip: initial;  
background-image: initial; background-origin: initial; background-position: initial; background-repeat:  
initial; background-size: initial; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;);  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; line-height:  
18.4px;">&nbsp;merupakan komponen elektronika</span></span><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;);  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; line-height:  
18.4px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;);  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; font-weight:  
normal;">&nbsp;dasar</span><span style="background-attachment: initial; background-clip: initial;  
background-image: initial; background-origin: initial; background-position: initial; background-repeat:  
initial; background-size: initial; cursor:
```


 Simbol Resistor

 Simbol Resistor

Resistor mempunyai nilai resistansi (tahanan) tertentu yang dapat memproduksi

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

antara kedua pin dimana nilai tegangan terhadap resistansi tersebut

berbanding lurus dengan arus yang mengalir, berdasarkan persamaan Hukum

OHM :

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

 Simbol Resistor

18.4px;"></p><div class="MsoNormal" style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 400; line-height: normal; text-align: center;"></div><div class="MsoNormal" style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 400; line-height: normal; text-align: center;"><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /></div><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;">Dimana V adalah tegangan, I adalah kuat arus, dan R adalah Hambatan.</div><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"><span style="color: #303030; cursor:

```

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-weight:
normal;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><br style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"
/></span></span></span></div><div style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="color:
#303030; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-weight:
normal;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Di

```

dalam resistor, terdapat ketentuan untuk membaca nilai resistor yang

```

diwakili dengan kode warna dengan ketentuan di bawah ini :</span></span></span></div><div
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align:
center;"><span style="color: #303030; cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-weight:
normal;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><div class="separator"
style="clear: both; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><a
href="https://lh3.googleusercontent.com/-q8nuy7fPAsk/X2u93yeQpjl/AAAAAAAP14/xiGGcCRh3CYVfpxa
Hi093QM91Dc7vTODwCLcBGAsYHQ/image.png" style="color: #888888; cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em;
margin-right: 1em; text-decoration-line: none;"></a></div><br style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /><br style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),

```

```

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"
/></span></span></span></div><div style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align:
center;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><div class="separator"
style="clear: both; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><div class="separator"
style="clear: both; color: #303030; cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-weight:
normal;"><a
href="https://lh3.googleusercontent.com/-WdvyNw9k78I/X2u-efcbkal/AAAAAAAAAP2E/Up1s5HgoJfk3MTLnVfJMFSlpdaWqOTzQwCLcBGAsYHQ/image.png" style="color: #888888; cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em;
margin-right: 1em; text-decoration-line: none;"></a></div><br style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /><div style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: left;"><div
style="box-sizing: border-box; color: #373b41; cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-weight: 400;
text-align: justify;">Sebagian

```

besar resistor yang kita lihat memiliki empat pita berwarna . Oleh

```

karena itu ada cara membacanya seperti ketentuan dibawah ini :</div><div style="box-sizing: border-box;
color: #373b41; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-weight: 400;
text-align: justify;">1. Dua pita pertama dan kedua menentukan nilai dari resistansi</div><div
style="box-sizing: border-box; color: #373b41; cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-weight: 400;
text-align: justify;">2. Pita ketiga menentukan faktor pengali, yang akan memberikan nilai
resistansi.</div><div style="box-sizing: border-box; color: #373b41; cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),

```

url("https://ani.cursors-4u.net/games/gam-16/gam1571.png")), auto; font-weight: 400; text-align: justify;">3. Dan terakhir, kita keempat menentukan nilai toleransi.</div></div></div></div></h4></div></div><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani")), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png")), auto;"><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani")), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png")), auto;" /></div></div><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani")), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png")), auto; text-align: start;"><b style="color: #666666; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani")), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png")), auto;">Rumus Resistor:</div><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani")), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png")), auto; text-align: start;"><p class="MsoNormal" style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial; color: #666666; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani")), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png")), auto; line-height: normal; text-indent: 36pt; vertical-align: baseline;">total</sub> = R_{1} + R_{2} + R<sub style="cursor:

url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="border:
1pt none windowtext; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; padding:
0cm;">3</sub> + + R<sub style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="border:
1pt none windowtext; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; padding:
0cm;">n</sub></p><p class="MsoNormal" style="background-attachment: initial;
background-clip: initial; background-image: initial; background-origin: initial; background-position: initial;
background-repeat: initial; background-size: initial; color: #666666; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height: normal;
margin-left: 72pt; vertical-align: baseline;"><span style="color: black; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">Dimana :<br
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" />Rtotal = Total Nilai
Resistor<br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" />R<sub style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="border:
1pt none windowtext; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; padding:
0cm;">1</sub> = Resistor ke-1<br style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" />R<sub style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="border:
1pt none windowtext; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; padding:
0cm;">2</sub> = Resistor ke-2<br style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" />R<sub style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="border:
1pt none windowtext; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; padding:
0cm;">3</sub> = Resistor ke-3<br style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" />R<sub style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="border:
1pt none windowtext; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; padding:

0cm;">n</sub> = Resistor ke-n</p><p class="MsoNormal" style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial; color: #666666; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height: normal; text-indent: 36pt; vertical-align: baseline;">Paralel: 1/R_{total} = 1/R_{1} + 1/R_{2} + 1/R_{3} + + 1/R_{n}</p><p class="MsoNormal" style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial; color: #666666; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height: normal; margin-left: 72pt; vertical-align: baseline;">Dimana :<br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" />R<sub style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="border:

1pt none windowtext; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; padding:
0cm;">total</sub> = Total Nilai Resistor<br style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" />R<sub style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="border:
1pt none windowtext; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; padding:
0cm;">1</sub> = Resistor ke-1<br style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" />R<sub style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="border:
1pt none windowtext; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; padding:
0cm;">2</sub> = Resistor ke-2<br style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" />R<sub style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="border:
1pt none windowtext; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; padding:
0cm;">3</sub> = Resistor ke-3<br style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" />R<sub style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="border:
1pt none windowtext; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; padding:
0cm;">n</sub> = Resistor ke-n</p><p class="MsoNormal"
style="background-attachment: initial; background-clip: initial; background-image: initial;
background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial;
color: #666666; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height: normal;
margin-left: 72pt; vertical-align: baseline;"><br style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"
</p></div><div style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: start;"><div
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><div style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><ul style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height: 1.4; margin:
0.5em 0px; padding: 0px 2.5em;"><li style="cursor:

```

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin: 0px 0px 0.25em;
padding: 0px;"><span style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><b style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;),
auto;">Dioda</b></span></li></ul><div style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><b style="border: 0px
none; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-stretch: inherit;
font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: inherit; margin: 0px; padding:
0px; vertical-align: baseline;">Dioda</b>&nbsp;adalah

```

komponen elektronika yang terdiri dari dua kutub dan berfungsi
menyearahkan arus. Komponen ini terdiri dari penggabungan dua
semikonduktor yang masing-masing diberi doping (penambahan material)
yang berbeda, dan tambahan material konduktor untuk mengalirkan

```

listrik.Dioda memiliki simbol sebagai berikut :</span></div></div><div style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align:
center;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><div class="separator"
style="clear: both; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><a
href="https://1.bp.blogspot.com/-AuNjbzlq6VE/X3TTCYzpuMI/AAAAAAAAAP_s/Xp6QNSyiVJIHo4jXfvtAKxg-
hfPG3al3wCLcBGAsYHQ/s254/Gambar%2BDIODA.JPG" style="color: #1a8e57; cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em;
margin-right: 1em; text-decoration-line: none;"></a></div>Gambar Simbol Dioda<br style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /><div style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: left;"><span
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),

```

url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /></div></div></div><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><h2 style="border: 0px none; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: 22px; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: 1.6; margin: 0px 0px 10px; padding: 0px; position: relative; vertical-align: baseline;">Cara Kerja Dioda</h2><p style="border: 0px none; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: inherit; margin: 0px 0px 20px; padding: 0px; vertical-align: baseline;">Secara

sederhana, cara kerja dioda dapat dijelaskan dalam tiga kondisi, yaitu

kondisi tanpa tegangan (unbiased), diberikan tegangan positif (forward

biased), dan tegangan negatif (reverse biased).</p><h3 style="border: 0px none; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; font-weight: normal; line-height: 1.6; margin: 0px 0px 10px; padding: 0px; position: relative; vertical-align: baseline;">A. Kondisi tanpa tegangan</h3><p style="border: 0px none; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: inherit; margin: 0px 0px 20px; padding: 0px; vertical-align: baseline;">Pada

kondisi tidak diberikan tegangan akan terbentuk suatu perbatasan medan

listrik pada daerah P-N junction. Hal ini terjadi diawali dengan proses

difusi, yaitu Bergeraknya muatan elektro dari sisi n ke sisi p.

Elektron-elektron tersebut akan menempati suatu tempat di sisi p yang

disebut dengan holes. Pergerakan elektron-elektron tersebut akan

meninggalkan ion positif di sisi n, dan holes yang terisi dengan

elektron akan menimbulkan ion negatif di sisi p. Ion-ion tidak bergerak

ini akan membentuk medan listrik statis yang menjadi penghalang

pergerakan elektron pada dioda.

</p><div style="border: 0px none; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: 1.6; margin: 0px 0px 10px; padding: 0px; position: relative; vertical-align: baseline;">B. Kondisi tegangan positif (Forward-bias)</div><p style="border: 0px none; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: inherit; margin: 0px 0px 20px; padding: 0px; vertical-align: baseline;">Pada

kondisi ini, bagian anoda disambungkan dengan terminal positif sumber

listrik dan bagian katoda disambungkan dengan terminal negatif. Adanya

tegangan eksternal akan mengakibatkan ion-ion yang menjadi penghalang

aliran listrik menjadi tertarik ke masing-masing kutub. Ion-ion negatif

akan tertarik ke sisi anoda yang positif, dan ion-ion positif akan

tertarik ke sisi katoda yang negatif. Hilangnya penghalang-penghalang

tersebut akan memungkinkan pergerakan elektron di dalam dioda, sehingga

arus listrik dapat mengalir seperti pada rangkaian tertutup.

</p><div class="code-block code-block-5" style="border: 0px none; clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: inherit; margin: 8px auto; padding: 0px; text-align: center; vertical-align: baseline;"></div><p style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"></p><p style="border:

Opx none; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: inherit; margin: 0px 0px 20px; padding: 0px; vertical-align: baseline;"></p><div class="code-block code-block-7" style="border: 0px none; clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: inherit; margin: 8px auto; padding: 0px; text-align: center; vertical-align: baseline;"></div></div><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><h3 style="border: 0px none; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; font-weight: normal; line-height: 1.6; margin: 0px 0px 10px; padding: 0px; position: relative; vertical-align: baseline;">C. Kondisi tegangan negatif (Reverse-bias)</h3><p style="border: 0px none; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: inherit; margin: 0px 0px 20px; padding: 0px; vertical-align: baseline;">Pada

kondisi ini, bagian anoda disambungkan dengan terminal negatif sumber listrik dan bagian katoda disambungkan dengan terminal positif. Adanya tegangan eksternal akan mengakibatkan ion-ion yang menjadi penghalang aliran listrik menjadi tertarik ke masing-masing kutub. Pemberian tegangan negatif akan membuat ion-ion negatif tertarik ke sisi katoda (n-type) yang diberi tegangan positif, dan ion-ion positif tertarik ke sisi anoda (p-type) yang diberi tegangan negatif. Pergerakan ion-ion tersebut searah dengan medan listrik statis yang menghalangi pergerakan elektron, sehingga penghalang tersebut akan semakin tebal oleh ion-ion.

Akibatnya, listrik tidak dapat mengalir melalui dioda dan rangkaian

diibaratkan menjadi rangkaian terbuka.

<div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: left;"><h2 style="box-sizing: inherit; color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: 22px; font-weight: 400; margin: 0px 0px 15px; position: relative;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">3. </div><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"><div class="separator" style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: bold;"><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /><p

style="-webkit-font-smoothing: antialiased !important; backface-visibility: hidden; box-sizing: border-box; color: #2c3e50; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 400; margin: 0px 0px 15px; overflow-wrap: break-word; text-shadow: rgba(0, 0, 0, 0.024) 1px 1px 1px;"><picture class="alignnone size-full wp-image-1726" style="-webkit-font-smoothing: antialiased !important; backface-visibility: hidden; box-sizing: border-box; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin: 0px auto 20px; text-shadow: rgba(0, 0, 0, 0.024) 1px 1px 1px;"><source style="-webkit-font-smoothing: antialiased !important; backface-visibility: hidden; box-sizing: border-box; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-shadow: rgba(0, 0, 0, 0.024) 1px 1px 1px;" type="image/webp"></source></picture></p></div></div></h2><ul style="color: #373b41; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 700; line-height: 1.4; margin: 0.5em 0px; padding: 0px 2.5em; text-align: justify;"><li style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin: 0px 0px 0.25em; padding: 0px;"><div class="separator" style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: left;"><div style="box-sizing: border-box; color: #373b41; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin: 0px; position: relative; text-align: justify;">Transistor NPN</div></div></div><div style="color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 700; text-align: justify;"><span style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial;

cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height:
18.4px;">Transistor<span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: start;"><span
style="background-attachment: initial; background-clip: initial; background-image: initial;
background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial;
cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height:
18.4px;"><span style="color: #373b41; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"),
auto;"> adalah alat semikonduktor<span style="color:
#373b41; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height:
18.4px;"><span style="background-attachment: initial; background-clip: initial; background-image: initial;
background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial;
cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: start;"><span
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight:
normal;"> yang

dipakai sebagai penguat, sebagai sirkuit pemutus dan penyambung arus

(switching), stabilisasi tegangan, dan modulasi sinyal. Transistor dapat

berfungsi semacam kran listrik, di mana berdasarkan arus inputnya (BJT)

atau tegangan inputnya (FET), memungkinkan pengaliran listrik yang

sangat akurat dari sirkuit sumber listriknya. Kapasitor NPN memiliki

simbol seperti gambar di bawah ini:</div><div style="color: #222222;
cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 700;
text-align: center;"><span style="color: #373b41; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height:
18.4px;"><span style="background-attachment: initial; background-clip: initial; background-image: initial;
background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial;
cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: start;"><div
class="separator" style="clear: both; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"><a
href="https://1.bp.blogspot.com/-i5cn6USINNw/X2vBnHOto0I/AAAAAAAAAP2U/TwkTVY-Z5qo_iBPwd4InoR

G3p34NKHNgwCLcBGAsYHQ/s254/BC547.PNG" style="color: #888888; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin-left: 1em; margin-right: 1em; text-decoration-line: none;"></div>Simbol Transistor NPN BC547<br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /></div><div style="color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 700; text-align: center;"><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /></div><div style="color: #373b41; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 700; text-align: justify;">Terdapat rumus rumus dalam mencari transistor seperti rumus di bawah ini:</div><div style="color: #373b41; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 700; text-align: center;"><p class="MsoNormal" style="color: #666666; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 400; line-height: normal; margin-left: 54pt; text-align: start;"><span style="cursor:

url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="color:
black; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">Rumus dari Transitor
adalah :<span style="color: black; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"></p><p>
align="center" class="MsoNormal" style="color: #666666; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 400;
line-height: normal; margin-bottom: 0cm;"><span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><i style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span lang="SV"
style="color: black; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">h</i><sub
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span lang="SV"
style="color: black; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">FE</sub><span
lang="SV" style="color: black; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"> = <i
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><i>C</i><i style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><i><b style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"),
auto;">B<span style="background-color: #e3a327; color: black; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"></p><p>
class="MsoNormal" style="background-attachment: initial; background-clip: initial; background-image:
initial; background-origin: initial; background-position: initial; background-repeat: initial; background-size:
initial; color: #666666; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 400;
line-height: 11.2pt; margin-bottom: 0cm; margin-left: 36pt; text-align: justify;"><span lang="SV"
style="color: #333333; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">dimana, <i
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">iC</i> =&
perubahan arus kolektor<span style="color: black; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"> <span
style="color: black; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"></p><p>
class="MsoNormal" style="background-attachment: initial; background-clip: initial; background-image:

initial; background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial; color: #666666; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 400; line-height: 11.2pt; margin-bottom: 0cm; margin-left: 36pt; text-align: justify; text-indent: 42pt;"><i style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">iB</i> = perubahan arus basis </p><p class="MsoNormal" style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial; color: #666666; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 400; line-height: 11.2pt; margin-bottom: 0cm; margin-left: 36pt; text-align: justify; text-indent: 42pt;"><i style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">h_{FE}</i> = arus yang dicapai</p></div></div><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /></div><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">Rumus dari Transistor adalah :</div><div class="separator" style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"></div></div><div style="color: #222222; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani");,
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");, auto;"><h4 style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani");,
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");, auto; margin: 0px; position:
relative;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani");,
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");, auto; text-align: center;"><div
class="separator" style="clear: both; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani");,
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");, auto;"><div style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani");,
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");, auto; text-align: left;"><div
style="box-sizing: border-box; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani");,
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");, auto; text-align: justify;"><div
style="color: #373b41; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani");,
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");, auto;"><b style="color:
#333333; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani");,
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");, auto; text-align:
left;">Karakteristik Input</div></div></div></div></h4><h4 style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani");,
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");, auto; margin: 0px; position:
relative;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani");,
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");, auto; text-align: center;"><div
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani");,
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");, auto; text-align: left;"><span
style="color: #333333; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani");,
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");, auto; font-weight:
400;">Transistor

```

adalah komponen aktif yang menggunakan aliran electron sebagai prinsip

kerjanya didalam bahan. Sebuah transistor memiliki tiga daerah doped

yaitu daerah emitter, daerah basis dan daerah disebut kolektor.

Transistor ada dua jenis yaitu NPN dan PNP. Transistor memiliki dua

sambungan: satu antara emitter dan basis, dan yang lain antara kolektor

dan basis. Karena itu, sebuah transistor seperti dua buah dioda yang

saling bertolak belakang yaitu dioda emitter-basis, atau disingkat

dengan emitter dioda dan dioda kolektor-basis, atau disingkat dengan

dioda kolektor.

**Bagian**

emitter-basis dari transistor merupakan dioda, maka apabila dioda emitter-basis dibias maju maka kita mengharapkan akan melihat grafik arus terhadap tegangan dioda biasa. Saat tegangan dioda emitter-basis lebih kecil dari potensial barriernya, maka arus basis ( $I_b$ ) akan kecil.

Ketika tegangan dioda melebihi potensial barriernya, arus basis ( $I_b$ )

akan naik secara cepat.

**Karakteristik Output**

**Sebuah**

transistor memiliki empat daerah operasi yang berbeda yaitu daerah aktif, daerah saturasi, daerah cutoff, dan daerah breakdown. Jika transistor digunakan sebagai penguat, transistor bekerja pada daerah aktif. Jika transistor digunakan pada rangkaian digital, transistor biasanya beroperasi pada daerah saturasi dan cutoff. Daerah breakdown biasanya dihindari karena resiko transistor menjadi hancur terlalu

besar.</span></div><div style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: left;"><span  
style="color: #333333; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-weight: 400;"><br  
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /></span></div><div  
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: left;"><span  
style="color: #333333; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Gelombang I/O  
Transistor</span></div><div style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: left;"><div  
style="color: #393939; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-weight: 400;  
text-align: justify;"><div class="separator" style="clear: left; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; float: left;  
margin-bottom: 1em; margin-right: 1em; text-align: right;"></div></div><div style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: left;"></div></div></h4></div></span></div><p class="MsoNormal" style="text-align:  
justify;"><br style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: Georgia,  
Utopia, &quot;Palatino Linotype&quot;, Palatino, serif; font-size: 15.4px; text-align: start;" /><span  
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px;  
line-height: 18.4px; text-align: start;"><br style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /></span></p><p><p  
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size:  
15.4px;"></p><p class="MsoNormal" style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size:  
15.4px;"><span face="&quot;Arial&quot;, &quot;sans-serif&quot;" style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height:  
33.7333px;"><span face="&quot;Arial&quot;, &quot;sans-serif&quot;" style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 18.4px;"></span></span></p><div style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: Georgia, Utopia, &quot;Palatino Linotype&quot;; Palatino, serif; font-size: 15.4px;"><ul style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 1.4; margin: 0.5em 0px; padding: 0px 2.5em;"><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin: 0px 0px 0.25em; padding: 0px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><span style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><b style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">OP-AMP</b></span></span></li></ul><div style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: Georgia, Utopia, &quot;Palatino Linotype&quot;; Palatino, serif; font-size: 15.4px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><span style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><br style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /></span></span></div><div style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: Georgia, Utopia, &quot;Palatino Linotype&quot;; Palatino, serif; font-size: 15.4px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;">Simbol&nbsp;</span></span><p style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;">&nbsp;</span></p><div class="separator" style="clear: both; color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><a href="https://1.bp.blogspot.com/-5x8xIR3SHrk/X7CuK\_YXlPI/AAAAAAAAAAtI/a1FN2esp-jMAFarc2XgU7LOlOPwnHnRxACLcBGAsYHQ/s225/simbol%2Bop-am.png" style="color: #2187bb; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em; margin-right: 1em; text-decoration-line: none;"></a><span style="color: black; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><a href="https://1.bp.blogspot.com/-tdRbskCqMMg/X7r0gc9B2jI/AAAAAAAABto/cYOrU8QgejwkgffnTHGmJD55HOTLhYQ-wCLcBGAsYHQ/s183/pro%2Bopamp.png" style="color: #2187bb; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em; margin-right: 1em; text-decoration-line: none;"></a></span><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 24px;">&nbsp;</span></span></div><div class="separator" style="clear: both; color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 24px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;">Berfungsi sebagai penguat atau pembanding tegangan input dengan output.</span></span></div><p class="MsoNormal" style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 19.8px; margin: 0cm 0cm 0cm 14.2pt;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 24px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;">&nbsp;</span></span></p><p align="center" class="MsoNormal" style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 19.8px;

margin-bottom: 0cm; text-align: center;">"><span style="color: black; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;); url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto;"><a href="https://1.bp.blogspot.com/-ByoKvQcsAzw/X7r0gaNBWGI/AAAAAAAAABtk/DLEGJ7\_JHagZU1j6\_jWdp aOKHgJyJ50PgCLcBGAsYHQ/s414/confi%2Bopamp.jpg" style="color: #2187bb; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;); url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; margin-left: 1em; margin-right: 1em; text-decoration-line: none;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;); url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; font-family: arial;"></span></a></span></p><p class="MsoNormal" style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;); url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; line-height: 19.8px; margin: 0cm 0cm 0cm 14.2pt;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;); url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; line-height: 24px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;); url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; font-family: arial;">&nbsp;</span></span></p><p class="MsoNormal" style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;); url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; line-height: 19.8px; margin: 0cm 0cm 0cm 14.2pt;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;); url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; line-height: 24px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;); url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; font-family: arial;">Karakteristik IC OpAmp</span></span></p><ul style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;); url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; line-height: 1.4; margin: 0cm 0px 0.5em; padding: 0px 2.5em;" type="disc"><li class="MsoNormal" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;); url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; line-height: 19.8px; margin: 0px 0px 0cm; padding: 0px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;); url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; line-height: 24px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;); url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; font-family: arial;">Penguatan Tegangan Open-loop atau  $A_v = \infty$  (tak terhingga)</span></span></li><li class="MsoNormal" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;); url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;); auto; line-height: 19.8px; margin: 0px 0px 0cm; padding: 0px;"><span style="cursor:

[illegible]

[illegible]

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.ani)

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto;">&nbsp;&nbsp;&nbsp;&nbsp;</span><span style="color: #222222; cursor:

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.png),

auto;">&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;<br style="cursor:

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto;" /></span><span style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;;,

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto;"></span></span><p style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;;,

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto;"><span style="cursor:

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; font-family:

arial;">Karakteristik IC OpAmp</span></p><ul style="color: #222222; cursor:

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; line-height: 1.4; margin:

0.5em 0px; padding: 0px 2.5em;"><li style="cursor:

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; margin: 0px 0px 0.25em;

padding: 0px;"><span style="cursor:

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; font-family:

arial;">Penguatan Tegangan Open-loop atau  $A_v = \infty$  (tak terhingga)</span></li><li style="cursor:

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; margin: 0px 0px 0.25em;

padding: 0px;"><span style="cursor:

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; font-family:

arial;">Tegangan Offset Keluaran (Output Offset Voltage) atau  $V_{oo} = 0$  (nol)</span></li><li style="cursor:

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; margin: 0px 0px 0.25em;

padding: 0px;"><span style="cursor:

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; font-family:

arial;">Impedansi Masukan (Input Impedance) atau  $Z_{in} = \infty$  (tak terhingga)</span></li><li style="cursor:

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; margin: 0px 0px 0.25em;

padding: 0px;"><span style="cursor:

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; font-family:

arial;">Impedansi Output (Output Impedance ) atau  $Z_{out} = 0$  (nol)</span></li><li style="cursor:

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; margin: 0px 0px 0.25em;

padding: 0px;"><span style="cursor:

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;;](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; font-family: arial;">Lebar Pita (Bandwidth) atau  $BW = \infty$  (tak terhingga)</span></li><li style="cursor:

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin: 0px 0px 0.25em;  
padding: 0px;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family:  
arial;">Karakteristik tidak berubah dengan suhu<br style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"  
/></span></li></ul><div class="separator" style="clear: both; color: #222222; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><a  
href="https://1.bp.blogspot.com/-cXSUrK9loME/X7CuWjP-OPi/AAAAAAAAAtM/c6FnKIKMcYAD64M00L5E  
MbhhQz8MCwjrgCLcBGAsYHQ/s414/Konfigurasi-Op-Amp-Closed-loop-and-Open-Loop.jpg" style="color:  
#2187bb; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em;  
margin-right: 1em; text-decoration-line: none;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"></span></a></div><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family:  
arial;"><span style="color: #222222; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><br style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /></span><span  
style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"></span></span><p  
style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family:  
arial;">Inverting Amplifier</span></p><div class="separator" style="clear: both; color: #222222; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><a  
href="https://1.bp.blogspot.com/-wkGfM3cOLps/X7CujFYLozI/AAAAAAAAAtU/uTsirl6ACx06tJ1JIfCVnHv-f\_j  
Kv4xegCLcBGAsYHQ/s245/inverting.png" style="color: #2187bb; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em;  
margin-right: 1em; text-decoration-line: none;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"></span></a></div><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><br  
style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /><span style="color:  
#222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;),  
auto;">&nbsp;Rumus:</span></span><div class="separator" style="clear: both; color: #222222; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><a  
href="https://1.bp.blogspot.com/-fircQfbByoc/X7CuuNmMasI/AAAAAAAAAtc/RIaif7PCT0gxqg\_K4fuZmFluRBvvGYIFQCLcBGAsYHQ/s156/rumus%2Binverting.png" style="color: #2187bb; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em;  
margin-right: 1em; text-decoration-line: none;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"></span></a></div><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><br  
style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /><span style="color:  
#222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;),  
auto;">NonInverting</span><br style="color: #222222; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /></span><div  
class="separator" style="clear: both; color: #222222; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><a  
href="https://1.bp.blogspot.com/-GBR-FHRwsGY/X7Cu9PNosjl/AAAAAAAAAtk/YyQkUMcFwJARwwWMfYDTEHnfzErGnsTwACLcBGAsYHQ/s275/noninverting.png" style="color: #2187bb; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em;  
margin-right: 1em; text-decoration-line: none;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"></span></a></div><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><br style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /><span style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">&nbsp;&nbsp;Rumus:</span></span><div class="separator" style="clear: both; color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><a href="https://1.bp.blogspot.com/-fEK2bw8k5dg/X7CvKeimlTI/AAAAAAAAAAts/ql4eN9x3ftktyygJ9gBi\_lyx6ugc2RA4AClCBGAsYHQ/s182/rumus%2Bnon.png" style="color: #2187bb; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em; margin-right: 1em; text-decoration-line: none;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"></span></a></div><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><br style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /><span style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Komparator</span></span><div class="separator" style="clear: both; color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><a href="https://1.bp.blogspot.com/-1pZcqRuO\_R0/X7CvTrKW65I/AAAAAAAAAAt0/gov3hZ\_wbIASvtCHEk-5ETUQc9oDLt\_6wCLcBGAsYHQ/s213/komparator.png" style="color: #2187bb; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em; margin-right: 1em; text-decoration-line: none;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"></span></a></div><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><br style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /><span style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Rumus:</span></span><div class="separator" style="clear: both; color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><a href="https://1.bp.blogspot.com/-6Hto1NIFY0o/X7CvXyvb8sl/AAAAAAAAAt4/R0QC-9vM0-QLbE2gYmfDdDdJdZA1cg52AClBGAsYHQ/s265/rumus%2Bkomparator.png" style="color: #2187bb; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em; margin-right: 1em; text-decoration-line: none;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"></span></a></div><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><br style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /><span style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Adder</span></span><div class="separator" style="clear: both; color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><a href="https://1.bp.blogspot.com/-ZPSkEmHAePs/X7CvHN1dXGI/AAAAAAAAAuA/Nq80TtsAFng3xshHeTXfNHrviM-vBVo2AClBGAsYHQ/s320/adder.png" style="color: #2187bb; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em; margin-right: 1em; text-decoration-line: none;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"></span></a></div><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><br  
style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /><span style="color:  
#222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;),  
auto;">Rumus:</span></span><div class="separator" style="clear: both; color: #222222; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><a  
href="https://1.bp.blogspot.com/-xz8yl03Bxyk/X7CvnF7uCaI/AAAAAAAAAul/o22fs-cdpcAed9q9vVz6TmP5  
g-unXS3JQCLcBGAsYHQ/s270/rumus%2Baddr.png" style="color: #2187bb; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em;  
margin-right: 1em; text-decoration-line: none;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"></span></a></div><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><br  
style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /><span style="color:  
#222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Bentuk  
Gelombang</span></span><div class="separator" style="clear: both; color: #222222; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family:  
&quot;Trebuchet MS&quot;; Trebuchet, Verdana, sans-serif; text-align: center;"><a  
href="https://1.bp.blogspot.com/-fnxMXvYRzbo/X7Cv0acRvfl/AAAAAAAAAUQ/-attVKq0GKwDsUCd94GPg  
UveZ8qusy7cgCLcBGAsYHQ/s357/bentuk%2Bgelombanggg.gif" style="color: #32aaff; cursor:  
url(&quot;https://cur.cursors-4u.net/games/gam-13/gam1282.cur&quot;), progress !important;  
margin-left: 1em; margin-right: 1em; text-decoration-line: none;"></a></div><span style="cursor:

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><div style="color:  
#222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-weight:  
bold;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><b style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><br  
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /></b></span></div><p  
class="MsoNormal" style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family:  
arial;"></p><ul style="color: #222222; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;  
font-weight: bold; line-height: 1.4; margin: 0.5em 0px; padding: 0px 2.5em;"><li style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin: 0px 0px 0.25em;  
padding: 0px;"><span face="&quot;Arial&quot;,&quot;sans-serif&quot;" style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 18.4px;"><b  
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Gerbang NOT (IC  
7404)</b></span></li></ul><p style="color: #222222; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;  
font-weight: bold;"></p><p class="MsoNormal" style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;  
text-align: center;">&nbsp;</p><div class="separator" style="clear: both; color: #222222; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;  
font-weight: bold; text-align: center;"><a  
href="https://blogger.googleusercontent.com/img/a/AVvXsEg29K9BDXxENkhzLL1kyWyD0oXj4NuHcR1d2O  
C7I5VNYG7MeCxuZHgvqB-6m5MTt2H8ORtHuXVZtXYGg2gj-j4GdAoETGxHARs\_Q-s86e4C2\_xKCV5U1rGDPF  
L75GkoTPidkVV1da0HLXY2O2gPJSckoqm03BkcN648\_ao\_ZGdtokhEHqAMoSMfBvlgug" style="color:  
#1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em;  
margin-right: 1em; text-decoration-line: none;"></a></div><br style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /><p style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial; font-weight: bold;"></p><p class="MsoNormal" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><span face="&quot;Arial&quot;,&quot;sans-serif&quot;" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 18.4px;">Gerbang

NOT atau disebut juga "NOT GATE" atau Inverter (Gerbang Pembalik)

adalah jenis gerbang logika yang hanya memiliki satu input (Masukan) dan

satu output (keluaran). Dikatakan Inverter (gerbang pembalik) karena

gerbang ini akan menghasilkan nilai ouput yang berlawanan dengan nilai

inputnya . Untuk lebih jelasnya perhatikan simbol dan tabel kebenaran

gerbang NOT berikut.</span></p><p class="MsoNormal" style="cursor:

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"></p><div class="separator" style="clear: both; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial; text-align: center;"><a href="https://1.bp.blogspot.com/-yLpGqvCock4/YCsFG9oRII/AAAAAAAAACT4/T53cTluo6Dw\_x9vI-Jlca2Qtff2SQcfAQCLcBGAsYHQ/s550/Simbol-Gerbang-Logika-NOT-dan-Tabel-Kebenaran-Gerbang-NOT.jpg" style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em; margin-right: 1em; text-decoration-line: none;"></a></div><br style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial; line-height: 18.4px;"><br style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /></span><p style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"></p><p class="MsoNormal" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><span face="&quot;Arial&quot;,&quot;sans-serif&quot;" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 18.4px;">Pada

gerbang logika NOT, simbol yang menandakan operasi gerbang logika NOT

adalah tanda minus (-) diatas variabel, perhatikan gambar diatas.</span></p><p class="MsoNormal" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><span face="&quot;Arial&quot;,&quot;sans-serif&quot;" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 18.4px;">Perhatikan

tabel kebenaran gerbang NOT. Cara cepat untuk mengingat tabelnya adalah

dengan mengingat pernyataan berikut. "Gerbang NOT akan menghasilkan

output (keluaran) logika 1 bila variabel input (masukan) bernilai logika

0" sebaliknya "Gerbang NOT akan menghasilkan keluaran logika 0 bila

input (masukan) bernilai logika 1"</span></p><div class="separator" style="clear: both; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><div style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 32px; text-align: justify;"><ul style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 1.4; margin: 0.5em 0px; padding: 0px 2.5em;"><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin: 0px 0px 0.25em; padding: 0px;"><b style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span lang="EN-US" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 32px;">Gerbang Logika XOR (IC 4030)</span></b></li></ul><span lang="EN-US" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 32px;"><div style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: &quot;Times



inverter, di mana salah satu input melewati data biner dan input

lainnya berfungsi sebagai pemberi signal kontrol.

Tabel kebenaran untuk logika Ex-OR adalah

initial; background-size: initial; border: medium none; box-shadow: rgba(0, 0, 0, 0.1) 1px 1px 5px; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; padding: 8px; position: relative;" /></span></a></div><p style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: &quot;Times New Roman&quot;, &quot;serif&quot;;"></p><p class="MsoNormal" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: &quot;Times New Roman&quot;, &quot;serif&quot;; line-height: 32px; text-align: justify;"></p><div class="separator" style="clear: both; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: &quot;Times New Roman&quot;, &quot;serif&quot;; text-align: center;"><a href="https://1.bp.blogspot.com/-UFUgwYa-d9g/YF693ZyCHEI/AAAAAAAAAE7g/5USD0x8ahcQNIjGXqh6Sb0\_UShAE8dbfACLcBGAsYHQ/s129/xor4.PNG" style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em; margin-right: 1em; text-decoration-line: none;"><span style="color: black; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"></span></a></div><p style="color: #666666; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: &quot;Times New Roman&quot;, &quot;serif&quot;;"></p><p class="MsoNormal" style="color: #666666; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: &quot;Times New Roman&quot;, &quot;serif&quot;; line-height: 32px; text-align: justify;"></p><div class="separator" style="clear: both; color: #666666; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: &quot;Times New Roman&quot;, &quot;serif&quot;; text-align: center;"><a href="https://1.bp.blogspot.com/-jSIfn8cYUdg/YF697PuA9nI/AAAAAAAAAE7k/p7FZJm4ySO0DcxtYPL-4DeKzRJsHQk9HQCLcBGAsYHQ/s171/xor5.PNG" style="color: #2198a6; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em; margin-right: 1em; text-decoration-line: none;"></a></div></div><p style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family:  
arial;"></p><p class="MsoNormal" style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family:  
arial;"><span face="&quot;Arial&quot;;&quot;sans-serif&quot;" style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height:  
18.4px;"></span></p><p class="MsoNormal" style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family:  
arial;"></p><ul style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;  
line-height: 1.4; margin: 0.5em 0px; padding: 0px 2.5em;"><li style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin: 0px 0px 0.25em;  
padding: 0px;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height:  
33.7333px;"><span face="&quot;Arial&quot;;&quot;sans-serif&quot;" style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 18.4px;"><b  
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Decoder (IC  
7447)</b></span></span></li></ul><p style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family:  
arial;"></p><p style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family:  
arial;"></p><p class="MsoNormal" style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;  
text-align: center;"><span face="&quot;Arial&quot;;&quot;sans-serif&quot;" style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height:  
18.4px;"><span face="&quot;Arial&quot;;&quot;sans-serif&quot;" style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height:  
18.4px;"></span></span></p><div class="separator" style="clear: both; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;  
text-align: center;"><span face="&quot;Arial&quot;;&quot;sans-serif&quot;" style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height:  
18.4px;"><span face="&quot;Arial&quot;;&quot;sans-serif&quot;" style="cursor:

[illegible]

BCD 7447 merupakan IC yang bertujuan mengubah data BCD (Binary Coded

bekerja pada tegangan 5V ini khusus untuk menyalakan seven segment.

seven segment yang bekerja pada konfigurasi common cathode menggunakan

IC 7447.</span></p><p class="MsoNormal" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><span face="&quot;Arial&quot;;&quot;sans-serif&quot;" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 18.4px;">Konfigurasi Pin Decoder:</span></p><p class="MsoNormal" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"></p><div class="separator" style="clear: both; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial; text-align: center;"><a href="https://1.bp.blogspot.com/-hLft11KwB64/YCt-Td9eyPI/AAAAAAAAACWo/jW2w0F5mTWklIwPcSuSN\_jYy8zcLuooVQCLcBGAsYHQ/s228/pin%2Bdecoder.jpg" style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em; margin-right: 1em; text-decoration-line: none;"></a></div><p class="MsoNormal" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><span face="&quot;Arial&quot;,&quot;sans-serif&quot;" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 18.4px;">a. Pin Input IC BCD, memiliki fungsi sebagai masukan IC BCD yang terdiri dari 4 Pin, nama&nbsp;&nbsp;&nbsp;<span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">&nbsp;&nbsp;&nbsp;</span>pin masukan BCD dilangkan dengan huruf kapital yaitu A, B, C&nbsp;&nbsp;&nbsp;dan D. Pin input berkeja&nbsp;&nbsp;<span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">&nbsp;&nbsp;&nbsp;</span>dengan logika High=1.</span></p><p class="MsoNormal" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><span face="&quot;Arial&quot;,&quot;sans-serif&quot;" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 18.4px;">b. Pin Ouput IC BCD, memiliki fungsi untuk mengaktifkan seven segmen sesuai data yang&nbsp;&nbsp;<span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">&nbsp;&nbsp;&nbsp;</span>diolah dari pin input. Pin output berjumlah 7 pin yang namanya dilambangkan dengan&nbsp;&nbsp;<span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">&nbsp;&nbsp;&nbsp;</span>aljabar

huruf kecil yaitu, b, c, d, e, f dan g. Pin Output bekerja dengan

logika low=0. Karena&nbsp;&nbsp;itulah IC 7447 digunakan untuk seven segment common

anode.</span></p><p class="MsoNormal" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><span face="&quot;Arial&quot;,&quot;sans-serif&quot;" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 18.4px;">c. Pin LT (Lamp Test) memiliki fungsi untuk mengaktifkan semua output menjadi aktif low,&nbsp;&nbsp;<span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;</span><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;</span>sehingga

semua led pada seven segmen menyala dan menampilkan angka 8. Pin LT

akan&nbsp;&nbsp;aktif jika diberi logika low. Pin ini juga digunakan untuk mengetes

kondisi LED pada seven segment.

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),  
[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; font-family:  
arial;"><span face="&quot;Arial&quot;;&quot;sans-serif&quot;" style="cursor:  
[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),  
[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; line-height: 18.4px;">d.

Pin RBI (Ripple Blanking Input) memiliki fungsi untuk menahan data

input (disable input), pin RBI akan aktif jika diberi logika low.

Sehingga seluruh pin output akan berlogika High, dan seven segment tidak

aktif.

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),  
[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; font-family:  
arial;"><span face="&quot;Arial&quot;;&quot;sans-serif&quot;" style="cursor:  
[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),  
[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; line-height:  
18.4px;"></span></p><p class="MsoNormal" style="cursor:  
[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),  
[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; font-family:  
arial;"><span face="&quot;Arial&quot;;&quot;sans-serif&quot;" style="cursor:  
[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),  
[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; line-height: 18.4px;">e.

Pin RBO (Ripple blanking Output) memiliki fungsi untuk menahan data

output (disable output), pin RBO ini akan aktif jika diberikan logika

Low. Sehingga seluruh pin output akan berlogika High, dan seven segment

tidak aktif.

[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),  
[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; font-family:  
arial;"><span face="&quot;Arial&quot;;&quot;sans-serif&quot;" style="cursor:  
[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),  
[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; line-height:  
33.7333px;"><span face="&quot;Arial&quot;;&quot;sans-serif&quot;" style="cursor:  
[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),  
[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; line-height:  
18.4px;"></span></span></p><p class="MsoNormal" style="cursor:  
[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),  
[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; font-family:  
arial;"><span face="&quot;Arial&quot;;&quot;sans-serif&quot;" style="cursor:  
[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.ani),  
[url\(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;\);](https://ani.cursors-4u.net/games/gam-16/gam1571.png), auto; line-height:  
18.4px;">Pada

aplikasi IC dekoder 7447, ketiga pin (LT, RBI dan RBO) harus diberi

logika HIGH=1 agar tidak aktif. Baik IC 7447 atau 7448 pada bagian

output perlu dipasang resistor untuk membatasi arus yang keluar sehingga

led pada seven segment bekerja secara optimal. Berikut ini rangkaian IC

dekoder 7448 untuk konfigurasi seven segment common cathode.

- 
Encoder 74147 width="270" />

74147 adalah IC encoder digital yang mengkodekan 9 jalur input menjadi 4

jalur output. Ini juga dikenal sebagai encoder prioritas Desimal ke

BCD. Istilah encoder prioritas digunakan karena menyediakan pengkodean

untuk jalur data urutan tertinggi sebagai prioritas pertama. Itu dibuat menggunakan teknologi Transistor-Transistor Logic (TTL). Ini adalah IC encoder 10 hingga 4. Pada artikel ini, kita akan melihat Diagram Pin IC 74147, Diagram Sirkuit Internal IC 74147, dan tabel Truth atau tabel

fungsi IC 74147

```
<b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">.</div><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: arial;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /></div><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><div style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: 0px 0px; background-repeat: initial; background-size: initial; border: 0px none; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: arial; margin: 0px; outline: 0px; padding: 0px; transition: all 0.3s ease 0s; vertical-align: baseline;">Here, you can see the truth table of IC 74147</div><div style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: 0px 0px; background-repeat: initial; background-size: initial; border: 0px none; color: #5e5e5e; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "PT Serif", sans-serif; margin: 0px; outline: 0px; padding: 0px; transition: all 0.3s ease 0s; vertical-align: baseline;"><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; outline: 0px; transition: all 0.3s ease 0s;" /></div><div class="separator" style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: 0px 0px; background-repeat: initial; background-size: initial; border: 0px none; clear: both; color: #5e5e5e; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "PT Serif", sans-serif; margin: 0px; outline: 0px; padding: 0px; text-align: center; transition: all 0.3s ease 0s; vertical-align: baseline;"><div class="separator" style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"></div></div></div></div></div></div></div><div><sp
an style="font-family: arial;">
</div><div
style="background-color: white; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: 15.4px;"><div
class="separator" style="clear: both; color: #222222; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><ul style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height: 1.4; margin:
0.5em 0px; padding: 0px 2.5em;"><li style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin: 0px 0px 0.25em;
padding: 0px;"><span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><div style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><div class="separator"
style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><b style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">Sensor
Sentuh</div></div></div><div class="separator" style="clear: both; color: #222222;
cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial,
Tahoma, Helvetica, FreeSans, sans-serif; text-align: center;"><a
href="https://1.bp.blogspot.com/-Vrw6UXL1Vfo/XgV3v4EiLwI/AAAAAAAAAok/Xmzz2HEiVNY476680zRxJk
Bav1b6he0uACEwYBhgL/s1600/sensor%2Bsentuh.jpg" style="color: #888888; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-decoration-line:
none;"></div><div class="separator" style="clear: both; color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">1. Pengertian sensor sentuh</div><div class="MsoNormal" style="color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif;">

 Sensor sentuh pada dasarnya adalah saklar dengan berbagai macam

variasi bentuknya, penggunaan sensor sentuh disini digunakan untuk

menutup garasi.</div><div class="MsoNormal" style="color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"></div><div class="MsoNormal" style="color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">2. Cara Kerja Sensor Sentuh :</div><div class="MsoNormal" style="color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif;"><span style="cursor:

url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">

 Cara kerja sensor sentuh adalah active low, karena rangkaian ini
menggunakan resistor, resistor pull up dan pull down, rangkaian pull up
bersifat active low mengeluarkan sinyal 1 kecuali saat saklar aktif,
namun sebaliknya resistor pull down akan aktif jika mengeluarkan sinyal 0

kecuali saat saklar tidak aktif.</div><div class="MsoNormal" style="color: #222222;
cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial,
Tahoma, Helvetica, FreeSans, sans-serif;"><span lang="EN-US" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">Jika

rangkaian mengeluarkan sinyal 1 saat tombol tidak ditekan, namun jika
sangat tertekan maka sinyal output akan menjadi 0 karena dihubungkan

dengan ground.</div><div class="separator" style="clear: both; color: #222222; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial,
Tahoma, Helvetica, FreeSans, sans-serif;"></div><div class="MsoNormal" style="color: #222222; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial,
Tahoma, Helvetica, FreeSans, sans-serif;"><span lang="EN-US" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><b style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><br style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"
</div><div class="MsoNormal" style="color: #222222; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial,
Tahoma, Helvetica, FreeSans, sans-serif;"><span lang="EN-US" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><b style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">3. Jenis sensor
sentuh </div><div class="MsoNormal" style="color: #222222; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial,

Tahoma, Helvetica, FreeSans, sans-serif;"> sensor sentuh pada dasarnya adalah saklar limit

switch dan microswitch(saklar spdt) dengan berbagai macam bentuk

variasinya, sensor sentuh biasanya digunakan yaitu transistor pull up

bersifat active low yang berarti rangkaian mengeluarkan sinyal 1 kecuali

saklar aktif, saklar down yaitu bersifat kebalikan dari saklar pull up

yaitu bersifat active low yaitu rangkaian mengeluarkan sinyal 0 kecuali

saat saklar aktif, nilai resistor pada pull down berkisar antara 1-10kΩ</div></div><div

style="background-color: white; cursor:

url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),

url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: 15.4px;"><br

style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),

url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /></div><div

style="background-color: white; cursor:

url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),

url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size:

15.4px;"><span style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),

url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><b style="cursor:

url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),

url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">4. Grafik Respon

Sensor Sentuh</div><div style="background-color: white; cursor:

url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),

url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: 15.4px;

text-align: center;"></div><div

style="-webkit-text-size-adjust: auto; caret-color: rgb(102, 102, 102); font-family: "Trebuchet

MS", Trebuchet, sans-serif; text-size-adjust: auto;"><div><span

style="background-color: white; cursor:

url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),

url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Georgia,

Utopia, "Palatino Linotype", Palatino, serif; font-size: 15.4px;"><div style="cursor:

url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),

url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="cursor:

url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),

url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><div class="MsoNormal" style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height: normal; margin-bottom: 0cm; text-align: justify;"><ul style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: arial; line-height: 1.4; margin: 0.5em 0px; padding: 0px 2.5em;"><li style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin: 0px 0px 0.25em; padding: 0px;"><b style="color: #444444; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: x-large; text-align: left;">LM35</div></div></div><div style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Georgia, Utopia, "Palatino Linotype", Palatino, serif; font-size: 15.4px;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><p style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"></p><p class="MsoNormal" style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial; color: #666666; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height: normal; margin: 0cm 0cm 11.25pt 36pt; text-align: justify; text-indent: 9pt;">Sensor

suhu LM35 adalah komponen elektronika yang memiliki fungsi untuk mengubah besaran suhu menjadi besaran listrik dalam bentuk tegangan.

Sensor Suhu LM35 yang dipakai dalam penelitian ini berupa komponen

elektronika elektronika yang diproduksi oleh National Semiconductor.

LM35 memiliki keakuratan tinggi dan kemudahan perancangan jika

dibandingkan dengan sensor suhu yang lain, LM35 juga mempunyai keluaran

impedansi yang rendah dan linieritas yang tinggi sehingga dapat dengan

mudah dihubungkan dengan rangkaian kendali khusus serta tidak memerlukan

penyetelan lanjutan.

url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height: normal;
margin: 0cm 0cm 11.25pt 36pt; text-align: justify; text-indent: 9pt;"><span style="color: #222222; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: medium;
text-align: left;">Meskipun

tegangan sensor ini dapat mencapai 30 volt akan tetapi yang diberikan

kesensor adalah sebesar 5 volt, sehingga dapat digunakan dengan catu

daya tunggal dengan ketentuan bahwa LM35 hanya membutuhkan arus sebesar

60 μ A hal ini berarti LM35 mempunyai kemampuan menghasilkan panas

(self-heating) dari sensor yang dapat menyebabkan kesalahan pembacaan

yang rendah yaitu kurang dari 0,5°C pada suhu 25°C

style="color: #666666; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height: normal;
margin: 0cm 0cm 0cm 54pt;"><span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size:
medium;"><span style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">Simbol LM35 di
proteus :<span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"),
auto;"></p><div class="separator" style="clear: both; color: #666666; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"><a
href="https://1.bp.blogspot.com/-lqQW8pJla-w/X3Vj9stMVjl/AAAAAAAAAPw/OTCYKkqi24QITzwf19oPrQy3LGr1b_tzQCLcBGAsYHQ/s483/lm35.png" style="color: #627349; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin-left: 1em;
margin-right: 1em; text-decoration-line: none;"><span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size:
medium;"></div></div></div></div></div><ul style="text-align: left;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">Sensor PIR<p><p class="MsoNormal" style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "Times New Roman"; font-size: 15.4px; text-align: center;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"></p><div class="separator" style="background-color: white; clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: 15.4px; text-align: center;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"></div><span face=""Arial","sans-serif"" style="background-color: white; cursor:

url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: 12pt;
line-height: 18.4px;"><b style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><br style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /><br style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /><p
style="background-color: white; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size:
15.4px;"></p><p class="MsoNormal" style="background-color: white; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "Times
New Roman"; font-size: 15.4px;"><span face=""Arial","sans-serif""
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: 12pt;
line-height: 18.4px;">PIR

(Passive Infrared Receiver) merupakan sebuah sensor berbasiskan
infrared. Akan tetapi, tidak seperti sensor infrared kebanyakan yang
terdiri dari IR LED dan fototransistor. PIR tidak memancarkan apapun
seperti IR LED. Sesuai dengan namanya 'Passive', sensor ini hanya
merespon energi dari pancaran sinar inframerah pasif yang dimiliki oleh
setiap benda yang terdeteksi olehnya. Benda yang bisa dideteksi oleh

sensor ini biasanya adalah tubuh manusia</p><p class="MsoNormal" style="background-color:
white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "Times
New Roman"; font-size: 15.4px;"><span face=""Arial","sans-serif""
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: 12pt;
line-height: 18.4px;">Diagram sebsor PIR:</p><p class="MsoNormal" style="background-color:
white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "Times
New Roman"; font-size: 15.4px;"></p><div class="separator" style="background-color: white; clear:
both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "Times
New Roman"; font-size: 15.4px; text-align: center;"><a
href="https://1.bp.blogspot.com/-3CIL_GuWYlg/YCslJhk0LMI/AAAAAAAAACVo/JdTIGi5qvOUc4Nzr9VrXJ8yG
QNd_22qeAClCBGAsYHQ/s285/diagram%2Bpir.jpg" style="color: #1a8e57; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin-left: 1em;
margin-right: 1em; text-decoration-line: none;"></div><br style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "Times New Roman"; font-size: 15.4px;" /><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /><p style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "Times New Roman"; font-size: 15.4px;"></p><p class="MsoNormal" style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "Times New Roman"; font-size: 15.4px;">PIR

(Passive Infrared Receiver) merupakan sebuah sensor berbasis infrared. Akan tetapi, tidak seperti sensor infrared kebanyakan yang terdiri dari IR LED dan fototransistor. PIR tidak memancarkan apapun seperti IR LED. Sesuai dengan namanya 'Passive', sensor ini hanya merespon energi dari pancaran sinar inframerah pasif yang dimiliki oleh setiap benda yang terdeteksi olehnya. Benda yang bisa dideteksi oleh

sensor ini biasanya adalah tubuh manusia.</p><p class="MsoNormal" style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "Times New Roman"; font-size: 15.4px;"></p><p class="MsoNormal" style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "Times New Roman"; font-size: 15.4px;">Sensor

PIR ini bekerja dengan menangkap energi panas yang dihasilkan dari pancaran sinar inframerah pasif yang dimiliki setiap benda dengan suhu benda diatas nol mutlak. Seperti tubuh manusia yang memiliki suhu tubuh kira-kira 32 derajat celcius, yang merupakan suhu panas yang khas yang terdapat pada lingkungan. Pancaran sinar inframerah inilah yang kemudian ditangkap oleh Pyroelectric sensor yang merupakan inti dari sensor PIR ini sehingga menyebabkan Pyroelectric sensor yang terdiri dari galium nitrida, caesium nitrat dan litium tantalate menghasilkan arus listrik.

Mengapa bisa menghasilkan arus listrik? Karena pancaran sinar inframerah pasif ini membawa energi panas. Prosesnya hampir sama seperti arus

listrik yang terbentuk ketika sinar matahari mengenai solar cell.

Grafik Respon Pir terhadap suhu

Grafik Respon Pir terhadap suhu

Grafik Respon Pir terhadap suhu

Grafik Respon Pir terhadap suhu

Grafik Respon Pir terhadap suhu

Grafik Respon Pir terhadap suhu

Grafik Respon Pir terhadap suhu

Grafik Respon Pir terhadap suhu

Grafik Respon Pir terhadap suhu

Grafik Respon Pir terhadap suhu

New Roman" font-size: 15.4px; text-align: start;" /><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /><p style="color: black; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "Times New Roman"; font-size: 15.4px; text-align: start;"></p><p class="MsoNormal" style="color: black; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "Times New Roman"; font-size: 15.4px; text-align: start;"></p><p class="MsoNormal" style="color: black; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "Times New Roman"; font-size: 15.4px; text-align: start;">Grafik sensor pir terhadap jarak, kecepatan, arah objek</p><p class="MsoNormal" style="color: black; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "Times New Roman"; font-size: 15.4px; text-align: start;"></p><div class="separator" style="clear: both; color: black; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: "Times New Roman"; font-size: 15.4px;"></div></div><div class="separator" style="clear: both; text-align: center;"><div style="text-align: justify;">
<div><div style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),

url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Georgia, Utopia, "Palatino Linotype"; Palatino, serif; font-size: 15.4px;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><div class="separator" style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: 0px 0px; background-repeat: initial; background-size: initial; border: 0px none; clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin: 0px; outline: 0px; padding: 0px; transition: all 0.3s ease 0s; vertical-align: baseline;"><div class="MsoNormal" style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: arial; line-height: normal; margin-bottom: 0cm; text-align: justify;"><div class="separator" style="clear: both; color: #666666; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; text-align: center;"><div class="separator" style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: left;"><ul style="color: black; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Georgia, Utopia, "Palatino Linotype"; Palatino, serif; font-weight: 700; line-height: 1.4; margin: 0.5em 0px; padding: 0px 2.5em;"><li style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin: 0px 0px 0.25em; padding: 0px;">Sensor Gas MQ2<div style="color: black; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Georgia, Utopia, "Palatino Linotype"; Palatino, serif; font-weight: 700;"><span lang="EN-US" style="border: 0px none; color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 400; line-height: 24px; margin: 0px; outline: 0px; padding: 0px; text-align: justify; text-indent: 37.7953px;

background-clip: initial; background-image: initial; background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial; border: 1px solid rgb(233, 233, 233); box-shadow: rgba(0, 0, 0, 0.1) 1px 1px 5px; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; padding: 5px; position: relative;" /></div><div class="separator" style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">Gambar Simbol Sensor MQ2</div></div></div></div><div style="color: black; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Georgia, Utopia, "Palatino Linotype", Palatino, serif; font-weight: 700;"><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /></div><div style="color: black; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Georgia, Utopia, "Palatino Linotype", Palatino, serif; font-weight: 700;">Berikut ini adalah gambar grafik respon sensitifitas sensor MQ2</div><div style="color: black; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Georgia, Utopia, "Palatino Linotype", Palatino, serif; font-weight: 700; text-align: center;"><div class="separator" style="clear: both; color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 400; text-align: center;"></div></div></div><div class="separator" style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: left;"><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /></div><div class="separator" style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: left;"><div style="color: black; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Georgia, Utopia, "Palatino Linotype", Palatino, serif;"><ul style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height: 1.4; margin: 0.5em 0px; padding: 0px 2.5em;"><li style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin: 0px 0px 0.25em; padding: 0px;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">Potensiometer</div><div style="color: black; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Georgia, Utopia, "Palatino Linotype", Palatino, serif; text-align: center;"><div class="separator" style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"></div><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),

bawah ini :</div><div style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: 15.4px;"><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /><ul style="color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height: 1.4; margin: 0.5em 0px; padding: 0px 2.5em; text-indent: 37.7953px;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center; text-indent: 37.7953px;"><div class="separator" style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><a href="https://1.bp.blogspot.com/-yiS1RZzNo-w/X2wrcBxB6JPI/AAAAAAAAAP4s/LAotEuoEAlKp_g1_q64Rk5W

yALGyn5uZgCLcBGAsYHQ/s286/SIMBOL%2BRelay.jpg" style="color: #888888; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin-left: 1em; margin-right: 1em; text-decoration-line: none;"></div><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /></div><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><div class="separator" style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-indent: 37.7953px;"></div><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-indent: 37.7953px;" /><div class="separator" style="clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-indent: 37.7953px;"><a

https://1.bp.blogspot.com/-rtiAUUvpfh4/YGAJK89IL2I/AAAAAAAAQ0Q/SaOmTubX03sf_nksw06PgMy3MMmYpmo-QCLcBGAsYHQ/s260/Simbol%2BRelay.JPG

<https://ani.cursors-4u.net/games/gam-16/gam1571.ani>

<https://ani.cursors-4u.net/games/gam-16/gam1571.png>

Gambar Simbol Relay

Kapasitas Pengalihan Maksimum:

url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 400; text-align: center;">a href="https://1.bp.blogspot.com/-V0a2bktabnU/X3LflcK7DMI/AAAAAAAAAM0/K0eg6OqbDmcEavk8sg1lyYMM13lrM33TwCLcBGAsYHQ/s537/grapik.png" style="color: #3778cd; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin-left: 1em; margin-right: 1em; text-decoration-line: none;">img border="0" data-original-height="535" data-original-width="537" src="https://1.bp.blogspot.com/-V0a2bktabnU/X3LflcK7DMI/AAAAAAAAAM0/K0eg6OqbDmcEavk8sg1lyYMM13lrM33TwCLcBGAsYHQ/s320/grapik.png" style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial; border: medium none; box-shadow: rgba(0, 0, 0, 0.1) 1px 1px 5px; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; padding: 8px; position: relative;" width="320" /></div></div></div></div></div><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">Cara Kerja Relay<br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /><ul style="color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height: 1.4; margin: 0.5em 0px; padding: 0px 2.5em; text-indent: 37.7953px;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center; text-indent: 37.7953px;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: left;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-indent: 0px;"><ol style="box-sizing: inherit; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin-bottom: 1rem; margin-top: 0px;"><li style="box-sizing: inherit; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin: 0px 0px 0.25em; padding: 0px;">Apabila<i style="box-sizing: inherit; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"> coil</i> diberikan arus listrik, maka akan timbul gaya elektromagnetik yang dapat menarik armature untuk merubah <i style="box-sizing: inherit; cursor:

url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">switch contact
point</i>.<li style="box-sizing: inherit; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin: 0px 0px 0.25em;
padding: 0px;"><span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">Apabila <i
style="box-sizing: inherit; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">coil</i> <i>tersebut
sudah tidak dialiri arus listrik, maka Armature akan kembali lagi ke posisi <i style="box-sizing:
inherit; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">Normally
Close</i>.<li style="box-sizing: inherit; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin: 0px 0px 0.25em;
padding: 0px;"><span style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">Umumnya, <i
style="box-sizing: inherit; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">coil</i> <i>yang
digunakan oleh relay untuk mengubah <i style="box-sizing: inherit; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">switch contact
point</i> <i>ke posisi NC hanya membutuhkan arus listrik yang
kecil.</div></div></div></div></div><div class="separator"
style="background-color: white; clear: both; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: 15.4px;"><p
class="MsoNormal" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"></p><ul style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height: 1.4; margin:
0.5em 0px; padding: 0px 2.5em;"><li style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin: 0px 0px 0.25em;
padding: 0px;"><span face=""Arial","sans-serif"" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height: 18.4px;"><b
style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">7 Segment
Anoda<p style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"></p><p
class="MsoNormal" style="cursor:

```

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align:
center;"><span face="&quot;Arial&quot;,&quot;sans-serif&quot;" style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height:
18.4px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">&nbsp;
&nbsp;</span></span></p><div class="separator" style="clear: both; cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align:
center;"><span face="&quot;Arial&quot;,&quot;sans-serif&quot;" style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 18.4px;"><a
href="https://blogger.googleusercontent.com/img/a/AVvXsEglAxBhfTNhR4rUs3sZTuhObRzpL_PIPUobOy4F
BeNoNFxcioxmk3PeSyLiPREawim14bDbTofV0PIDjoOAF7xdf_65WmwqcPmSbWzrT57kfwamEBu4f0hwsx2-Q
OWTd2A5_aX_--fKPnJU58UkU6O4onIVUI7SjPkv8JrsE85I3KImVPDoG55fFd4Rg" style="color: #1a8e57;
cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em;
margin-right: 1em; text-decoration-line: none;"></a></span></div><p style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"></p><p
class="MsoNormal" style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span
face="&quot;Arial&quot;,&quot;sans-serif&quot;" style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height:
18.4px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">&nbsp;&nbsp;&nbsp;
&nbsp;</span>Seven

```

segment merupakan bagian-bagian yang digunakan untuk menampilkan angka

atau bilangan decimal. Seven segment tersebut terbagi menjadi 7 batang

LED yang disusun membentuk angka 8 dengan menggunakan huruf a-f yang

disebut DOT MATRIKS. Setiap segment ini terdiri dari 1 atau 2 LED (Light

Emitting Dioda). Seven segment bisa menunjukan angka-angka desimal

[illegible][illegible]

keluarannya berupa saluran-saluran untuk mengemudikan tampilan 7 segmen.

class="MsoNormal" style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"); auto;";></p><div class="separator" style="clear: both; cursor:

url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"><a
href="https://1.bp.blogspot.com/-Hlg4DBLL_3s/YCsz7U6Co5I/AAAAAAAAACWQ/6eATpfplvVY47H4av7WN_I
kTKhOnJHrYQCLcBGAsYHQ/s310/seven%2Bsegment%2Banod.jpg" style="color: #1a8e57; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin-left: 1em;
margin-right: 1em; text-decoration-line: none;"></div><p style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"></p><p
class="MsoNormal" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span
face=""Arial","sans-serif"" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height:
33.7333px;"><span face=""Arial","sans-serif"" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height:
18.4px;"></p><p class="MsoNormal" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span
face=""Arial","sans-serif"" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height:
18.4px;">Tabel Pengaktifan Seven Segment Display</p><p class="MsoNormal" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span
face=""Arial","sans-serif"" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height:
33.7333px;"></p><div class="separator" style="clear: both; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align:
center;"><span face=""Arial","sans-serif"" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height:
33.7333px;"><a
href="https://1.bp.blogspot.com/-zn9Gg7g5Zo0/YCt6Pvim0sl/AAAAAAAAACWc/Pw5PujbbKX8BykXAzw7S5t
t9ZYhqIDWHgCLcBGAsYHQ/s411/tabel%2Bseven%2Bsegment.jpg" style="color: #1a8e57; cursor:

```

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em;
margin-right: 1em; text-decoration-line: none;"></a></span></div><div class="separator" style="clear: both; cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><br
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /></div><h4
style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin: 0px; position:
relative;"><div style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><div
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: left;"><div
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><div
class="MsoNormal" style="background-attachment: initial; background-clip: initial; background-image:
initial; background-origin: initial; background-position: initial; background-repeat: initial; background-size:
initial; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: normal;
margin-bottom: 0cm; text-align: justify;"><ul style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 1.4; margin:
0.5em 0px; padding: 0px 2.5em;"><li style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin: 0px 0px 0.25em;
padding: 0px;"><span style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Light Emitting Code
(LED)</span></li></ul><div style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor:
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-weight: 400;
text-align: start;">&nbsp;

```

Light Emitting Diode atau sering disingkat dengan LED adalah komponen

elektronika yang dapat memancarkan cahaya monokromatik ketika diberikan

tegangan maju. LED merupakan keluarga Dioda yang terbuat dari bahan

semikonduktor. Warna-warna Cahaya yang dipancarkan oleh LED tergantung pada jenis bahan semikonduktor yang dipergunakannya. LED juga dapat memancarkan sinar inframerah yang tidak tampak oleh mata seperti yang sering kita jumpai pada Remote Control TV ataupun Remote Control

perangkat elektronik lainnya.

url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 400; text-align: start;"><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"

/></div></div></div><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 400;">

 Bentuk LED mirip dengan sebuah bohlam (bola lampu) yang kecil dan dapat dipasangkan dengan mudah ke dalam berbagai perangkat elektronika. Berbeda dengan Lampu Pijar, LED tidak memerlukan pembakaran filamen sehingga tidak menimbulkan panas dalam menghasilkan cahaya. Oleh karena itu, saat ini LED (Light Emitting Diode) yang bentuknya kecil telah banyak digunakan sebagai lampu penerang dalam LCD TV yang mengganti

lampu tube.

url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-weight: 400; text-align: justify;"><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"

/></div></div></div></h4><h2 style="border: 0px none; color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: 22px; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: 1.3; margin: 0px 0px 1.25rem; padding: 0px; position: relative; vertical-align: baseline;"><span style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;">Simbol dan Bentuk LED (Light Emitting Diode)</h2><h4 style="color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin: 0px; position: relative;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: left;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"></div><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><br style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /></div></div></div></h4><h2 style="border: 0px none; color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: 22px; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: 1.3; margin: 0px 0px 1.25rem; padding: 0px; position: relative; vertical-align: baseline;">Cara Kerja LED (Light

Emitting Diode)</h2><p class="MsoNormal" style="color: #666666; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; line-height: 26px; text-align: justify;"></p><h4 style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin: 0px; position: relative;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: center;"><div style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; text-align: left;"><p style="border: 0px none; color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px 0px 1.25rem; padding: 0px; vertical-align: baseline;">Seperti

dikatakan sebelumnya, LED merupakan keluarga dari Dioda yang terbuat dari Semikonduktor. Cara kerjanya pun hampir sama dengan Dioda yang memiliki dua kutub yaitu kutub Positif (P) dan Kutub Negatif (N). LED

hanya akan memancarkan cahaya apabila dialiri tegangan maju (bias

forward) dari Anoda menuju ke Katoda.</p><p style="border: 0px none; color: #222222; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-weight: inherit; line-height: inherit; margin: 0px 0px 1.25rem; padding: 0px; vertical-align: baseline;">LED

terdiri dari sebuah chip semikonduktor yang di doping sehingga menciptakan junction P dan N. Yang dimaksud dengan proses doping dalam semikonduktor adalah proses untuk menambahkan ketidakmurnian (impurity) pada semikonduktor yang murni sehingga menghasilkan karakteristik kelistrikan yang diinginkan. Ketika LED dialiri tegangan maju atau bias forward yaitu dari Anoda (P) menuju ke Katoda (K), Kelebihan Elektron pada N-Type material akan berpindah ke wilayah yang kelebihan Hole (lubang) yaitu wilayah yang bermuatan positif (P-Type material). Saat Elektron berjumpa dengan Hole akan melepaskan photon dan memancarkan

cahaya monokromatik (satu warna).

[</p><p style="border: 0px none; color: #222222; cursor: url\("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"\), url\("https://ani.cursors-4u.net/games/gam-16/gam1571.png"\), auto; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; font-weight: 400; line-height: inherit; margin: 0px 0px 1.25rem; padding: 0px; vertical-align: baseline;">LED](https://teknikelektronika.com/wp-content/uploads/2014/12/Cara-kerja-LED-Light-Emitting-Diode.jpg?x63439)

atau Light Emitting Diode yang memancarkan cahaya ketika dialiri

tegangan maju ini juga dapat digolongkan sebagai Transduser yang dapat

mengubah energi listrik menjadi energi cahaya

LED

class="MsoNormal" style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: 15.4px;"><p><ul style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Georgia, Utopia, "Palatino Linotype", Palatino, serif; font-size: 15.4px; line-height: 1.4; margin: 0.5em 0px; padding: 0px 2.5em;"><li style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; margin: 0px 0px 0.25em; padding: 0px;"><b style="cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;"><span style="cursor:

[illegible]

pergerakan kumpulan berhenti</p><p class="MsoNormal" style="background-color: white; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: 15.4px;"></p><div class="separator" style="background-color: white; clear: both; cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"), url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: 15.4px; text-align: center;"></div><br style="background-color: white; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-family: Georgia,
Utopia, "Palatino Linotype";, Palatino, serif; font-size: 15.4px;" /><span
style="background-color: white; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size: 15.4px;
line-height: 18.4px;"><br style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto;" /><p
style="background-color: white; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size:
15.4px;"></p><p class="MsoNormal" style="background-color: white; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size:
15.4px;"><span face=""Arial";"sans-serif"" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height:
33.7333px;"><span face=""Arial";"sans-serif"" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height:
18.4px;"></p><p class="MsoNormal" style="background-color: white; cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; font-size:
15.4px;"><span face=""Arial";"sans-serif"" style="cursor:
url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png"), auto; line-height:
18.4px;">Untuk

```

menggerakannya lagi, tepat pada saat kutub kumparan berhadapan dengan kutub magnet, arah arus pada kumparan dibalik. Dengan demikian, kutub utara kumparan akan berubah menjadi kutub selatan dan kutub selatannya akan berubah menjadi kutub utara. Pada saat perubahan kutub tersebut terjadi, kutub selatan kumparan akan berhadapan dengan kutub selatan magnet dan kutub utara kumparan akan berhadapan dengan kutub utara magnet. Karena kutubnya sama, maka akan terjadi tolak menolak sehingga kumparan bergerak memutar hingga utara kumparan berhadapan dengan selatan magnet dan selatan kumparan berhadapan dengan utara magnet. Pada saat ini, arus yang mengalir ke kumparan dibalik lagi dan kumparan akan berputar lagi karena adanya perubahan kutub. Siklus ini akan

berulang-ulang hingga arus listrik pada kumparan diputuskan.

### <ul style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-weight: 400; line-height: 1.4; margin: 0.5em 0px; padding: 0px 2.5em;"><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin: 0px 0px 0.25em; padding: 0px; text-align: left;"><b style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Voltmeter</span></b></li><div class="separator" style="clear: both; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><a href="https://1.bp.blogspot.com/-GGmgCJBA1NU/YGAH033\_pfl/AAAAAAAAAQ0E/L\_XV\_HUEGskNU6tPFNfTpw8qhC\_okpyeACLcBGAsYHQ/s125/Simbol%2BVoltmeter.JPG" style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em; margin-right: 1em; text-decoration-line: none;"></a></div></ul><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-weight: 400;"><div style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Volt

meter DC merupakan alat ukur yang berfungsi untuk mengetahui beda

potensial tegangan DC antara 2 titik pada suatu beban listrik atau

rangkaian elektronika.

### <div style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><div style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><div style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><div style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: left;"><div style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><div style="color: #393939; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-weight: 400;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><div style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><div style="color: #444444; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: left;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><div style="color: black; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: &quot;Times New Roman&quot;;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><div style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; text-align: center;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"></span></div><div style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; text-align: center;"><br style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /></div><div style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; text-align: center;"><div style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: Georgia, Utopia, &quot;Palatino Linotype&quot;, Palatino, serif;"></div></div></span></div></span></div></div></span></span></div></div></span></div></div></div></h4><p class="MsoNormal" style="background-color: white; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px;"><span face="&quot;Arial&quot;,&quot;sans-serif&quot;" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height:

18.4px;"></span></p><h3 style="background-color: white; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin: 0px; position: relative;"><ul style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 1.4; margin: 0.5em 0px; padding: 0px 2.5em;"><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif; margin: 0px 0px 0.25em; padding: 0px; text-align: left;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Ground</span></span></span></li></ul><div style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: Arial, Tahoma, Helvetica, FreeSans, sans-serif;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><div class="separator" style="clear: both; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"></span></div><div style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-weight: 400;">Ground Berfungsi sebagai&nbsp;</span><span style="color: #333333; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-weight: 400; text-align: justify;">untuk meniadakan beda potensial dengan mengalirkan arus sisa dari kebocoran tegangan atau arus<span face="open\_sansregular, Arial, Helvetica, sans-serif" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">&nbsp;pada  
rangkaian</span></span></div></span></div></h3><div style="background-color: white; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: Georgia,  
Utopia, &quot;Palatino Linotype&quot;;, Palatino, serif; font-size: 15.4px;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><div  
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-weight: 700;  
text-indent: 37.7953px;"><ul style="color: #222222; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 1.4; margin:  
0.5em 0px; padding: 0px 2.5em;"><li style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin: 0px 0px 0.25em;  
padding: 0px; text-indent: 0px;"><span lang="EN-US" style="border: 0px none; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 24px;  
margin: 0px; outline: 0px; padding: 0px; text-align: justify; text-indent: 37.7953px; vertical-align:  
baseline;"><div style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: left;"><div  
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><div  
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: left;"><div  
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><div  
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: left;"><div  
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><div  
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: left;"><span  
style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;),  
auto;">Baterai</span></div><p style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;),  
auto;"></p></div></div></div></div></div></span></li></ul><div style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span  
face="&quot;Open Sans&quot;;, Helvetica, Arial, sans-serif" style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-weight: 400;  
text-indent: 0px;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="color:

#222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">B</span>aterai

(Battery) adalah sebuah alat yang dapat merubah energi kimia yang disimpannya menjadi energi Listrik yang dapat digunakan oleh suatu perangkat Elektronik. Hampir semua perangkat elektronik yang portabel seperti Handphone, Laptop, Senter, ataupun Remote Control menggunakan Baterai sebagai sumber listriknya. Dengan adanya Baterai, kita tidak perlu menyambungkan kabel listrik untuk dapat mengaktifkan perangkat elektronik kita sehingga dapat dengan mudah dibawa kemana-mana. Dalam kehidupan kita sehari-hari, kita dapat menemui dua jenis Baterai yaitu Baterai yang hanya dapat dipakai sekali saja (Single Use) dan Baterai yang dapat di isi ulang (Rechargeable). Baterai simbol seperti gambar di

bawah ini:</span></span></div><div style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: center;"><div class="separator" style="clear: both; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><a href="https://1.bp.blogspot.com/-jljrncd7eVw/X2wzUG8Yi5I/AAAAAAAAAP5Q/BwpXifvutCA8rbW7bMJ2kd8quhVdTb9XACLcBGAsYHQ/s255/Screenshot%2B2020-09-23%2B160006.png" style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em; margin-right: 1em; text-decoration-line: none;"><span style="color: black; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"></span></a></div></div></div><br style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;" /></span></div><div style="background-color: white; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: Georgia, Utopia, &quot;Palatino Linotype&quot;, Palatino, serif; font-size: 15.4px; text-align: center;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><b



diubah menjadi sumber daya yang dibutuhkan oleh berbagai perangkat elektronik lainnya. Arus listrik yang disalurkan oleh power supply ini adalah jenis arus bolak-balik (AC). Namun karena kelebihan dari power supply ini, maka alat ini juga dapat mengubah arus bolak-balik (AC)

menjadi arus searah (DC). Power supply memiliki simbol sebagai berikut

<div class="separator" style="clear: both; color: #3a3a3a; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-weight: 400;"><a href="https://1.bp.blogspot.com/-eycxgdg0tBXU/X3Tg70Rqz3I/AAAAAAAAQAE/vxaARfxTzrcX41DM38k09b25-nMgZnf-gCLcBGAsYHQ/s44/POWER.PNG" style="color: #888888; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em; margin-right: 1em; text-decoration-line: none;"></a></div><span style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Gambar simbol power supply</span></div><div style="border: 0px none; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin: 0px 0px 1.5em; padding: 0px; text-align: justify; text-indent: 0px;"><div style="font-family: &quot;Times New Roman&quot;; text-align: left;"><ul style="text-align: left;"><li><span style="font-family: arial;">Generator DC</span></li></ul></div><div style="text-align: center;"><span style="font-family: arial;"><div style="background-color: white; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: &quot;Times New Roman&quot;; font-size: 15.4px;"><span style="color: #222222; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: x-large;"><div class="separator" style="clear: both; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><a href="https://1.bp.blogspot.com/-5H3FyG3JoMo/X5J5pmN-m1I/AAAAAAAAQL4/3asNCfJgXPMMWcxkmNoywo46CBgrcOnfgCLcBGAsYHQ/s123/Simbol%2BGenerator%2BDC.JPG" style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin-left: 1em;

margin-right: 1em; text-decoration-line: none;"></a></div></span></div><div style="text-align: left;"><div style="background-color: white; border: 0px none; font-family: Arial, sans-serif; font-size: 14px; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><table cellpadding="0" cellspacing="0" hspace="0" style="border-collapse: collapse; border-spacing: 0px; border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; height: auto; line-height: inherit; margin: 1.5em 0px; max-width: 100%; padding: 0px; vertical-align: baseline;" vspace="0"><tbody style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><tr style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><td align="left" style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;" valign="top"><div class="MsoNormal" style="border: 0px none; font-family: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: normal; margin: 0px 0px 0.0001pt; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">Generator

DC merupakan sebuah perangkat mesin listrik dinamis yang mengubah

energi mekanis menjadi energi listrik. Generator DC menghasilkan arus DC

/ arus searah. Generator DC dibedakan menjadi beberapa jenis

berdasarkan dari rangkaian belitan magnet atau penguat eksitasinya

terhadap jangkar (anker), jenis generator DC yaitu:</span></div></td></tr></tbody></table></div><div style="background-color: white; border: 0px none; font-family: Arial, sans-serif; font-size: 14px; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><table cellpadding="0" cellspacing="0" hspace="0" style="border-collapse: collapse; border-spacing: 0px; border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; height: auto; line-height: inherit; margin: 1.5em 0px; max-width:

100%; padding: 0px; vertical-align: baseline;" vspace="0"><tbody style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><tr style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><td align="left" style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0cm; vertical-align: baseline;" valign="top"><br /></td></tr></tbody></table></div><div style="background-color: white; border: 0px none; font-family: Arial, sans-serif; font-size: 14px; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><table cellpadding="0" cellspacing="0" hspace="0" style="border-collapse: collapse; border-spacing: 0px; border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; height: auto; line-height: inherit; margin: 1.5em 0px; max-width: 100%; padding: 0px; vertical-align: baseline;" vspace="0"><tbody style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><tr style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><td align="left" style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0cm; vertical-align: baseline;" valign="top"><ol style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0.5em 0em 0.5em 3em; padding: 0px; vertical-align: baseline;"><li style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px 0px 0.25em; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">Generator penguat terpisah</span></li><li style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px 0px 0.25em; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">Generator shunt</span></li><li style="border: 0px none; font-family: inherit;

font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px 0px 0.25em; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">Generator

kompon</span></span></span>&nbsp;&nbsp;&nbsp;</span></li></ol></td></tr></tbody></table></div><div style="background-color: white; border: 0px none; font-family: Arial, sans-serif; font-size: 14px; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><table cellpadding="0" cellspacing="0" hspace="0" style="border-collapse: collapse; border-spacing: 0px; border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; height: auto; line-height: inherit; margin: 1.5em 0px; max-width: 100%; padding: 0px; vertical-align: baseline;" vspace="0"><tbody style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><tr style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><td align="left" style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0cm; vertical-align: baseline;" valign="top"><br /></td></tr></tbody></table></div><div style="background-color: white; border: 0px none; font-family: Arial, sans-serif; font-size: 14px; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><table cellpadding="0" cellspacing="0" hspace="0" style="border-collapse: collapse; border-spacing: 0px; border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; height: auto; line-height: inherit; margin: 1.5em 0px; max-width: 100%; padding: 0px; vertical-align: baseline;" vspace="0"><tbody style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><tr style="border: 0px none; font-family: inherit;

inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><td align="left" style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0cm; vertical-align: baseline;" valign="top"><br /></td></tr></tbody></table></div><div style="background-color: white; border: 0px none; font-family: Arial, sans-serif; font-size: 14px; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><table cellpadding="0" cellspacing="0" hspace="0" style="border-collapse: collapse; border-spacing: 0px; border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; height: auto; line-height: inherit; margin: 1.5em 0px; max-width: 100%; padding: 0px; vertical-align: baseline;" vspace="0"><tbody style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><tr style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><td align="left" style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0cm; vertical-align: baseline;" valign="top"><div class="MsoNormal" style="border: 0px none; font-family: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: normal; margin: 0px 0px 0.0001pt; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"></span></span></div><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">Konstruksi Generator DC&nbsp;</span><br style="margin: 0px; padding: 0px;" /><div class="MsoNormal" style="border: 0px none; font-family: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: normal; margin: 0px 0px 0.0001pt; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">Pada

umumnya generator DC dibuat dengan menggunakan magnet permanent dengan

4-kutub rotor, regulator tegangan digital, proteksi terhadap beban

lebih, starter eksitasi, penyearah, bearing dan rumah generator atau

casis, serta bagian rotor. Gambar 1 menunjuk-kan gambar potongan

melintang konstruksi generator DC.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| <a href="https://1.bp.blogspot.com/-WqPD_Jlw_IM/VCLYqQ4o5EI/AAAAAAAAABac/03IxYT_YK30/s1600/generator%2BDC%2B1.png" style="border: 0px none; color: #01ace2; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px auto; outline: none; padding: 0px; text-decoration-line: none; transition: all 0.25s ease 0s; vertical-align: baseline;">Pengertian dan prinsip kerja generator DC</a> | Konstruksi Generator DC |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|

inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"></span></span></div><div class="MsoNormal" style="border: 0px none; font-family: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: normal; margin: 0px 0px 0.0001pt; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">Generator

DC terdiri dua bagian, yaitu stator, yaitu bagian mesin DC yang diam,

dan bagian rotor, yaitu bagian mesin DC yang berputar. Bagian stator

terdiri dari: rangka motor, belitan stator, sikat arang, bearing dan

terminal box. Sedangkan bagian rotor terdiri dari: komutator, belitan

rotor, kipas rotor dan poros rotor.</span><span style="border: 0px none; color: #4e81bd; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"></span></span></div><div class="MsoNormal" style="border: 0px none; font-family: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: normal; margin: 0px 0px 0.0001pt; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; color: #4e81bd; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"></span></span></div><table align="center" cellpadding="0" cellspacing="0" class="tr-caption-container" style="border-collapse: collapse; border-spacing: 0px; border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; height: auto; line-height: inherit; margin: 1.5em auto 0.5em; max-width: 100%; padding: 4px; position: relative; table-layout: fixed; text-align: center; vertical-align: baseline; width: 653px;"><tbody style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><tr style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><td style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><a href="https://3.bp.blogspot.com/-cpKYP5HpbxE/VCLYo6j2kBI/AAAAAAAAABaU/I7BSWATbdVg/s1600/generator%2BDC%2B2.png" style="border: 0px none; color: #01ace2; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">

inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit;  
font-variation-settings: inherit; line-height: inherit; margin: 0px auto; outline: none; padding: 0px;  
text-decoration-line: none; transition: all 0.25s ease 0s; vertical-align: baseline;"></td></tr><tr style="border: 0px none; font-family: inherit; font-feature-settings: inherit;  
font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit;  
font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings:  
inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><td class="tr-caption"  
style="border: 0px none; font-family: inherit; font-size: 11.2px; font-stretch: inherit; font-style: inherit;  
font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">Struktur  
Genertor DC</td></tr></tbody></table><div class="MsoNormal" style="border: 0px none; font-family:  
inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: normal;  
margin: 0px 0px 0.0001pt; padding: 0px; vertical-align: baseline;"><span style="border: 0px none;  
font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit;  
line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><span style="border: 0px none;  
color: #4e81bd; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit;  
font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit;  
font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height:  
inherit; margin: 0px; padding: 0px; vertical-align: baseline;"></span>&nbsp;<span style="border: 0px  
none; color: #4e81bd; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit;  
font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit;  
font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height:  
inherit; margin: 0px; padding: 0px; vertical-align: baseline;">&nbsp;</span>&nbsp;<span style="border:  
0px none; color: #4e81bd; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit;  
font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit;  
font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height:  
inherit; margin: 0px; padding: 0px; vertical-align: baseline;">&nbsp;</span>&nbsp;<span style="border:  
0px none; color: #4e81bd; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit;  
font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit;  
font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height:  
inherit; margin: 0px; padding: 0px; vertical-align: baseline;">&nbsp;</span>&nbsp;<span style="border:  
0px none; color: #4e81bd; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit;  
font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit;  
font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height:  
inherit; margin: 0px; padding: 0px; vertical-align: baseline;">&nbsp;</span>&nbsp;<span style="border:  
0px none; color: #4e81bd; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit;

[illegible]

font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; height: auto; line-height: inherit; margin: 1.5em 0px; max-width: 100%; padding: 0px; vertical-align: baseline;" vspace="0"><tbody style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><tr style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><td align="left" style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;" valign="top"><div class="MsoNormal" style="border: 0px none; font-family: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: normal; margin: 0px 0px 0.0001pt; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; letter-spacing: -0.05pt; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">Bagian yang harus menjadi perhatian untuk perawatan secara rutin adalah sikat arang</span><span style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">&nbsp;yang

akan memendek dan harus diganti secara periodic / berkala. Komutator

harus dibersihkan dari kotoran sisa sikat arang yang menempel dan serbuk

arang yang mengisi celah-celah komutator, gunakan amplas halus untuk

membersihkan noda bekas sikat arang.</span></span></span></div><div class="MsoNormal" style="border: 0px none; font-family: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: normal; margin: 0px 0px 0.0001pt; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><br style="margin: 0px; padding: 0px;" /></span></div><div class="MsoNormal" style="border: 0px none; font-family: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: normal; margin: 0px 0px 0.0001pt; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">Prinsip Kerja generator DC</span></div><div class="MsoNormal" style="border: 0px none; font-family: inherit;

font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: normal; margin: 0px 0px 0.0001pt; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">Prinsip kerja suatu generator arus searah berdasarkan hukum Faraday :<span style="border: 0px none; font-family: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">&nbsp;</span></span></span></span></div><div class="separator" style="border: 0px none; clear: both; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; text-align: center; vertical-align: baseline;"><a href="https://4.bp.blogspot.com/-nKeV7KXP\_9g/VCLYn0yfVTI/AAAAAAAAABaM/R\_La15gai3c/s1600/generator%2BDC%2B3.png" style="border: 0px none; color: #01ace2; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px 1em; outline: none; padding: 0px; text-decoration-line: none; transition: all 0.25s ease 0s; vertical-align: baseline;"></a></div><div class="MsoNormal" style="border: 0px none; font-family: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: normal; margin: 0px 0px 0.0001pt; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"></span></span></div><div class="MsoNormal" style="border: 0px none; font-family: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: normal; margin: 0px 0px 0.0001pt; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">Dengan

lain perkataan, apabila suatu konduktor memotong garis-garis fluksi

magnetik yang berubah-ubah, maka GGL akan dibangkitkan dalam konduktor

itu. Jadi syarat untuk dapat dibangkitkan GGL adalah :

- harus ada konduktor ( hantaran kawat )
- harus ada medan magnetik
- harus ada gerak atau perputaran dari konduktor dalam medan, atau ada fluksi yang berubah yang memotong konduktor itu

border-spacing: 0px; border: 0px none; color: black; font-family: Arial, sans-serif; font-size: 14px; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; height: auto; line-height: inherit; margin: 1.5em auto 0.5em; max-width: 100%; padding: 4px; position: relative; table-layout: fixed; text-align: center; vertical-align: baseline; width: 653px;"><tbody style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-ker-ning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><tr style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-ker-ning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><td style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-ker-ning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><a href="https://2.bp.blogspot.com/-KKvoyzIIWvM/VCLYtbb8a7I/AAAAAAAAABas/VUbN7PL0LGw/s1600/generator%2BDC%2B4.png" style="border: 0px none; color: #01ace2; font-family: inherit; font-feature-settings: inherit; font-ker-ning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px auto; outline: none; padding: 0px; text-decoration-line: none; transition: all 0.25s ease 0s; vertical-align: baseline;"></a></td></tr></tbody></table><br style="background-color: white; font-family: Arial, sans-serif; font-size: 14px; margin: 0px; padding: 0px;" /><span face="Arial, sans-serif" style="background-color: white; border: 0px none; font-size: small; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-ker-ning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">Keterangan gambar</span></span><br style="background-color: white; font-family: Arial, sans-serif; font-size: 14px; margin: 0px; padding: 0px;" /><div style="background-color: white; border: 0px none; font-family: Arial, sans-serif; font-size: 14px; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><table cellpadding="0" cellspacing="0" hspace="0" style="border-collapse: collapse; border-spacing: 0px; border: 0px none;

font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; height: auto; line-height: inherit; margin: 1.5em 0px; max-width: 100%; padding: 0px; vertical-align: baseline;" vspace="0"><tbody style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><tr style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><td align="left" style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0cm; vertical-align: baseline;" valign="top"><ul style="border: 0px none; font-family: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: 1.4; list-style-image: initial; list-style-position: outside; margin: 0.5em 0px; padding: 0px 2.5em; vertical-align: baseline;"><li style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px 0px 0.25em; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">Pada gambar Generator DC Sederhana dengan sebuah penghantar kutub tersebut,&nbsp;</span><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">dengan memutar rotor ( penghantar ) maka pada penghantar akan timbul EMF.</span><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">&nbsp;</span></li><li style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px 0px 0.25em; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">Kumparan ABCD terletak dalam medan magnet sedemikian rupa sehingga sisi A-</span><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">B dan C-D terletak tegak lurus pada arah fluks magnet.</span><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">&nbsp;</span></li><li style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px 0px 0.25em; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">Kumparan ABCD diputar dengan kecepatan sudut yang tetap terhadap sumbu</span><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch:

inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">&nbsp;putarnya yang sejajar dengan sisi A-B dan C-D.</span><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">&nbsp;</span></li><li style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px 0px 0.25em; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">GGL induksi yang terbentuk pada sisi A-B dan sisi C-D besarnya sesuai dengan</span><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">&nbsp;perubahan fluks magnet yang dipotong kumparan ABCD tiap detik sebesar</span></li></ul><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><span id="goog\_782568566" style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"></span><span id="goog\_782568567" style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"></span></span></td></tr></tbody></table></div><div class="separator" style="background-color: white; border: 0px none; clear: both; font-family: Arial, sans-serif; font-size: 14px; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: inherit; margin: 0px; padding: 0px; text-align: center; vertical-align: baseline;"><a href="https://2.bp.blogspot.com/-haTlbbDZPj0/VCLYr1sNral/AAAAAAAAABak/9HxeeJsZTjo/s1600/generator%2BDC%2B5.png" style="border: 0px none; color: #01ace2; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px 1em; outline: none; padding: 0px; text-decoration-line: none; transition: all 0.25s ease 0s; vertical-align: baseline;"></a></div><div style="background-color: white; border: 0px none; font-family: Arial, sans-serif; font-size: 14px; font-stretch: inherit; font-variant-east-asian: inherit; font-variant-numeric: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><table cellpadding="0" cellspacing="0" hspace="0" style="border-collapse: collapse; border-spacing: 0px; border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit;

inherit; font-variation-settings: inherit; height: auto; line-height: inherit; margin: 1.5em 0px; max-width: 100%; padding: 0px; vertical-align: baseline;" vspace="0"><tbody style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><tr style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;"><td align="left" style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;" valign="top"><div class="MsoNormal" style="border: 0px none; font-family: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: normal; margin: 0px 0px 0.0001pt; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">Untuk menentukan arah arus pada setiap saat, berlaku pada kaidah tangan kanan  
</span></div><ul style="border: 0px none; font-family: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: 1.4; list-style-image: initial; list-style-position: outside; margin: 0.5em 0px; padding: 0px 2.5em; vertical-align: baseline;"><li style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px 0px 0.25em; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">ibu jari : gerak perputaran</span><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">&nbsp;</span></li><li style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px 0px 0.25em; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">jari telunjuk : medan magnetik kutub utara dan selatan</span><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">&nbsp;</span></li><li style="border: 0px none; font-family: inherit; font-feature-settings: inherit; font-kerning: inherit; font-language-override: inherit; font-optical-sizing: inherit; font-size-adjust: inherit; font-size: inherit; font-stretch: inherit; font-style: inherit; font-variant: inherit; font-variation-settings: inherit; line-height: inherit; margin: 0px 0px 0.25em; padding: 0px; vertical-align: baseline;"><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">jari tengah : besaran galvanis tegangan U dan arus I</span><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">&nbsp;</span></li></ul><span style="border: 0px none; font-family: inherit; font-size: small; font-stretch: inherit; font-style: inherit; font-variant: inherit; line-height: inherit; margin: 0px; padding: 0px; vertical-align: baseline;">Untuk

```
disarankan.</td></tr></tbody></table></div></div></div><span style="color: #222222;
cursor: url("https://ani.cursors-4u.net/games/gam-16/gam1571.ani"),
url("https://ani.cursors-4u.net/games/gam-16/gam1571.png");,
auto;"> </div></div></div></div></div><div style="text-align:
justify;"><span style="background-color: white; color:
#222222;">4. Percobaan [Kembali]</div>

</div></div>
```

sensor PIR belum mendeteksi adanya manusia yang mau masuk ruangan, maka logic state berlogika 0 sehingga ouput akan berlogika 0 dan masuk ke gerbang not U5:A dan juga diumpankan ke resistor R17. Pada gerbang not

U5:A akan menjadi logika 1 dan masuk ke kaki XOR U9:B dan kaki XOR U9:B yang satu lagi terhubung ke output sensor TOUCH yang masih berlogika 0. karena salah satu kaki pada gerbang XOR U9:B berlogika 1, maka outputnya berlogika 1 dan masuk ke kaki 1 encoder U20. Pada kaki 2 encoder U20 didapat dari output sensor TOUCH yang berlogika 0 yang terhubung ke gerbang NOT U5:F sehingga menjadi logika 1 dan diteruskan ke kaki encoder U20. Karena pada semua kaki encoder U20 berlogika high maka semua output yang dikeluarkan sesuai tabel kebenaran ialah berlogika 1111 dan diteruskan ke gerbang NOT, sehingga menjadi berlogika 0000 yang akan masuk ke kaki input decoder U14 DCBA yang diteruskan ke seven segment common anoda dan menampilkan angka 0 yang menandakan kedua sensor belum mendeteksi adanya telur busuk. Pada output sensor mq2 yang diumpankan resistor R17 dan masuk rangkaian fixed bias, tegangan VBE yang terbaca pada transistor Q6 ialah +0,20 V. Dengan tegangan segitu belum cukup untuk memenuhi syarat agar transistor aktif yakni diatas 0,6 atau diatas 0,7; sehingga transistor off dan tidak ada arus yang mengalir dari power supply yang diteruskan ke relay ke kaki collector ke kaki emittor dan diteruskan ke ground, sehingga relay tidak aktif dan switch tidak berpindah dan LED D3 sebagai indikator tidak aktif yang menandakan sensor PIR belum mendeteksi adanya manusia dan motor juga belum aktif

untuk membukakan pintu.

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
 url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
 url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
 url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
 url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
 url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
 url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
 url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;

Ketika sensor PIR belum mendeteksi adanya manusia yang mau masuk ruangan, maka logic state berlogika 1 sehingga output akan berlogika 1 dan masuk ke gerbang not U5:A dan juga diumpankan ke resistor R17. Pada gerbang not

U5:A akan menjadi logika 0 dan masuk ke kaki XOR U9:B dan kaki XOR U9:B yang satu lagi terhubung ke output sensor LDR yang masih berlogika 0. karena dua kaki pada gerbang XOR U9:B berlogika 0, maka outputnya berlogika 0 dan masuk ke kaki 1 encoder U20. Pada kaki 2 encoder U20 didapat dari output sensor TOUCH yang berlogika 0 yang terhubung ke gerbang NOT U5:F sehingga menjadi logika 1 dan diteruskan ke kaki encoder U20. Karena hanya kaki 1 encoder U20 yang berlogika 0 dan yang lainnya berlogika high maka output yang dikeluarkan sesuai tabel kebenaran ialah berlogika 1110 dan diteruskan ke gerbang NOT, sehingga menjadi berlogika 0001 yang akan masuk ke kaki input decoder U14 DCBA yang diteruskan ke seven segment common anoda dan menampilkan angka 1 yang menandakan kedua

sensor mendeteksi adanya telur busuk.</span><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Pada

output sensor mq2 yang diumpankan resistor R17 dan masuk rangkaian fixed

bias, tegangan VBE yang terbaca pada transistor Q6 ialah +0,81 V.

Dengan tegangan segitu, cukup untuk memenuhi syarat agar transistor

aktif yakni diatas 0,6 atau diatas 0,7; sehingga transistor on dan ada

arus yang mengalir dari power supply yang diteruskan ke relay ke kaki

collector ke kaki emittor dan diteruskan ke ground, sehingga relay&nbsp; aktif

dan switch berpindah dari kiri ke kanan dan LED D3 </span>&nbsp;sebagai indikator aktif yang menandakan sensor PIR&nbsp; mendeteksi adanya manusia dan motor juga aktif untuk membukakan pintu.</div><div style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><br style="cursor:

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px;"

/></div></div></div><div class="title" style="background-color: white; text-align: justify;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Ketika

sensor LM 35&nbsp;belum mendeteksi adanya suhu diatas 27 derajat celcius ,

maka logic state berlogika 1 sehingga output akan berlogika 1 dan masuk ke

gerbang not U5:A dan juga diumpankan ke resistor R17. Pada gerbang not U5:A akan menjadi logika 0 dan masuk ke kaki XOR U9:B dan kaki XOR U9:B

yang satu lagi terhubung ke output sensor TOUCH yang masih berlogika 0. karena dua kaki pada gerbang XOR U9:B berlogika 0, maka outputnya

<span><span style="background-color: white; color: #222222;"><b>5. File Download</b></span></span>  
<a name="File"> </a><a href="#home">[Kembali]</a></span></div>

<br /><div><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px; margin: 0px 0px 0.25em; padding: 0px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;">Download File HTML&nbsp;<a href="https://docs.google.com/document/d/1WdHLdQryawnV8b2LhwKiYeHgB4MkJN5/edit?usp=sharing&ouid=103020688899119010422&amp;rtpof=true&amp;sd=true" style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line: none;">klik disini</a></span></li><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px; margin: 0px 0px 0.25em; padding: 0px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;">Download Rangkaian&nbsp;<a href="https://drive.google.com/uc?export=download&amp;id=1YGPfq9HWJM5qM0Up3TtXzD5Nd3Kvy4xa" style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line: none;">klik disini</a></span></li><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px; margin: 0px 0px 0.25em; padding: 0px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;">Download Video&nbsp;<a href="https://drive.google.com/drive/folders/17tPOdz9iSieNaNHhhZ1rGEeT6jBnkLR8?usp=sharing" style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line: none;">klik disini</a></span></li><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px; margin: 0px 0px 0.25em; padding: 0px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Download Data Sheet Resistor&nbsp;&nbsp;</span><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><a href="https://drive.google.com/uc?export=download&amp;id=1osD7Y0v4-BK0zgYh7N\_eMVWdxcor9mZI" style="background-attachment: initial; background-clip: initial; background-image: initial;

background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial; color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line: none;">klik disini</a></span></span></span></li><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px; margin: 0px 0px 0.25em; padding: 0px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Download Data Sheet Dioda 1N4001</span>&nbsp;</span><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><a href="https://drive.google.com/uc?export=download&amp;id=13EVsjqM8-u06iPOv4hPKL34nDKU1-fVf" style="color: #797979; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line: none;">klik disini</a></span></li><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px; margin: 0px 0px 0.25em; padding: 0px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Download Data Sheet Transistor NPN BC547&nbsp;<span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><a href="https://drive.google.com/uc?export=download&amp;id=15SzDYcbYcY08ohdkNvZR8klQbBQLsa9T" style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial; color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line: none;">klik disini</a></span></span></span></span></span></li><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px; margin: 0px 0px 0.25em; padding: 0px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;">Download Data Sheet Relay&nbsp;&nbsp;<span style="cursor:

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><a  
href="https://drive.google.com/uc?export=download&amp;id=1xuS3dOC6O\_\_a-LB3LPZY8J-B9fhx3\_Pc"  
style="background-attachment: initial; background-clip: initial; background-image: initial;  
background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial;  
color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line:  
none;">klik disini</a></span></span></span></span></li><li style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px;  
margin: 0px 0px 0.25em; padding: 0px;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family:  
arial;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Download Data Sheet  
LM358&nbsp;</span><a  
href="https://drive.google.com/uc?export=download&amp;id=1rMFxdDvoB02l7rbGL\_eINAlnZq7Wr-Ob"  
style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line:  
none;">Klik Disini</a></span></span></li><li style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px;  
margin: 0px 0px 0.25em; padding: 0px; text-align: justify;"><span style="color: #222222; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family:  
arial;">Download Data Sheet LED&nbsp;</span><a  
href="https://drive.google.com/uc?export=download&amp;id=1ajlOjqXOTyu\_xhGcZ1-2KLqm4ETP7jVM"  
style="background-attachment: initial; background-clip: initial; background-image: initial;  
background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial;  
color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;  
text-align: left; text-decoration-line: none; text-indent: -24px;"><span style="color: #6aa84f; cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">klik  
disini</span></a></li><li style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px;  
margin: 0px 0px 0.25em; padding: 0px;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family:  
arial;">Download Data Sheet Motor DC&nbsp;<span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><a href="https://drive.google.com/uc?export=download&amp;id=1ossohhvEoxQ5mpD38WQKAWOI3PuN\_faH" style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial; color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line: none;">klik disini</a></span></span></span></span></li><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px; margin: 0px 0px 0.25em; padding: 0px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;">Download Data Sheet Potensiometer&nbsp;<a href="https://drive.google.com/uc?export=download&amp;id=12z2YB\_C3hoTqW1a9leaGZP2YalCvapg" klik disini</a></span></span></span></li><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px; margin: 0px 0px 0.25em; padding: 0px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-indent: -24px;">Download Data sheet Touch Sensor</span><span style="color: #666666; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-indent: -24px;">&nbsp;</span><a href="https://drive.google.com/uc?export=download&amp;id=168eWlzi9p7xbEWUfxbul2r6J7QsfopMW" style="background-attachment: initial; background-clip: initial; background-image: initial; background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial; color: #627349; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line: none; text-indent: -24px;">klik disini</a></span></span></li><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px; margin: 0px 0px 0.25em; padding: 0px; text-align: justify;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Download Data Sheet Sensor Gas MQ2&nbsp;</span><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><a

href="https://drive.google.com/uc?export=download&id=1I52Lz6E\_hay4\_FO3o6kccvxTgUBYTOj2" style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line: none;">KLIK DISINI</a></span></li><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin: 0px 0px 0.25em; padding: 0px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-indent: -24px;">Download Data Sheet Suhu&nbsp;</span><span style="color: #666666; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-indent: -24px;">LM35&nbsp;</span><a href="https://drive.google.com/uc?export=download&id=1B72hsxpYp9NkaGety9UGSCEk-8E2pCG-" style="color: #627349; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line: none; text-indent: -24px;">klik disini</a></span></li><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px; margin: 0px 0px 0.25em; padding: 0px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="font-family: arial;">Download Data Sheet Sensor PIR&nbsp;</span><a href="https://docs.google.com/uc?export=download&id=1dlbVWh1TqgDOqNnMCLTKyFUX03xg-Ng-" style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line: none;">klik disini</a></span></li><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px; margin: 0px 0px 0.25em; padding: 0px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Download Data Sheet&nbsp;</span><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span lang="EN-US" style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; line-height: 18.4px; text-align: justify;">XOR IC 4030</span><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: justify;">&nbsp;</span><a href="https://drive.google.com/uc?export=download&id=1covozbriOaNHutCspmNgVnKks-u7Ksiv" style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-align: justify;

text-decoration-line: none;">klik disini</a></span></li><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px; margin: 0px 0px 0.25em; padding: 0px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;">Download Data Sheet NOT IC 7404&nbsp;<a href="https://drive.google.com/uc?export=download&id=1rYT2FbvB6tze6PVLLWpPKdkKNE9Qe6aj" style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line: none;">klik disini</a></span></li><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px; margin: 0px 0px 0.25em; padding: 0px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;">Download Data Sheet Decoder 7447&nbsp;<a href="https://drive.google.com/uc?export=download&id=14JQXmgNPtMDujlvjAztB\_xrt7X2Ee3m9" style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line: none;">[klik disini]</a></span></li><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px; margin: 0px 0px 0.25em; padding: 0px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;">Download Data Sheet Encoder IC 74147&nbsp;<a href="https://drive.google.com/uc?export=download&id=1rPgPUZxpdpupSMuyQmNf9wOOWtw\_YEizH" style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line: none;">klik disini</a></span></li><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px; margin: 0px 0px 0.25em; padding: 0px;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;">Download Data Sheet Seven Segment&nbsp;<a href="https://drive.google.com/uc?export=download&id=111iq21hI5YaedmhjGVXFvgVSFOZocPug" style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line: none;">[klik disini]</a></span></li><li style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px; margin: 0px 0px 0.25em; padding: 0px; text-align: justify;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;), url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family: arial;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),

url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Download File Library  
Sensor MQ2<a  
href="https://drive.google.com/uc?export=download&amp;id=1Y3lgEwyMwimtOnEaxzVbIGhJrFjp7N0F"  
style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line:  
none;">&nbsp;</a></span><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><a  
href="https://drive.google.com/uc?export=download&amp;id=1Y3lgEwyMwimtOnEaxzVbIGhJrFjp7N0F"  
style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line:  
none;">KLIK DISINI</a></span></span></li><li style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-size: 15.4px;  
margin: 0px 0px 0.25em; padding: 0px;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; font-family:  
arial;"><span style="cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-indent:  
-24px;">Download File Library Touch Sensor&nbsp;</span><a  
href="https://drive.google.com/uc?export=download&amp;id=1smoFrmtawytMtgXXC9ZHTCZiyxiZosV9"  
style="background-attachment: initial; background-clip: initial; background-image: initial;  
background-origin: initial; background-position: initial; background-repeat: initial; background-size: initial;  
color: #627349; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line:  
none; text-indent: -24px;">klik disini</a></span></span></span></li><li style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; margin: 0px 0px 0.25em;  
padding: 0px;"><span style="cursor:  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto;">Download File Library  
Sensor PIR&nbsp;<a  
href="https://drive.google.com/uc?export=download&amp;id=1u4bRI5cISl7CJnwmRWydJc57gBDtIlq5"  
style="color: #1a8e57; cursor: url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.ani&quot;),  
url(&quot;https://ani.cursors-4u.net/games/gam-16/gam1571.png&quot;), auto; text-decoration-line:  
none;">klik disini</a></span></li></span></div><blockquote class="tr\_bq">  
<span style="font-family: georgia;"> <a name="Akhir"> </a>  
<a href="#Awal"><span>[MENUJU AWAL]</span></a></span></blockquote>  
<span style="font-family: georgia; font-size: medium;"><br /></span>  
<br />  
<center>

</center>