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si-1_27.html#"><span style="font-family: &quot;times&quot; , &quot;times new roman&quot;
, serif;">[KEMBALI KE MENU SEBELUMNYA]</span></a></div>
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/></span>
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serif;"><b>DAFTAR ISI</b>
</span><br />
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<a href="#Jurnal"><span style="font-family: &quot;times&quot; , &quot;times new
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<div style="text-align: left;">
<a href="#Rangkaian_Percobaan"><span style="font-family: &quot;times&quot; ,
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/></span>
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href="#" name="Jurnal">Jurnal</a>&nbsp;<a
href="https://mfachriraisulamin183033.blogspot.com/p/tugas-pendahuluan-modul-1_27.html
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&nbsp;Gambar 1. 1 Jurnal Percobaan 1</div>
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Gambar 1.2 Jurnal Percobaan 1 & 2&nbsp;</div>
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Gambar 1.3 Jurnal Percobaan 2</div>
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style="font-family: &quot;times new roman&quot; , serif; font-size: 12pt; line-height:
115%;">2.&nbsp;</span><a href="#" name="Rangkaian_Percobaan">Rangkaian
Percobaan</a>&nbsp;<a
href="https://mfachriraisulamin183033.blogspot.com/p/tugas-pendahuluan-modul-1_27.html
#">[Kembali]</a></span></span><br />
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serif;"><span lang="EN-US" style="background-color: white; color: #222222; text-indent:
-18pt;">&nbsp;&nbsp;</span></span></b><br />
<div class="separator" style="clear: both; text-align: center;">
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serif;"><span lang="EN-US" style="background-color: white; color: #222222; text-indent:
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<div class="separator" style="clear: both; text-align: center;">
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<div style="text-align: center;">
<b><span style="font-family: &quot;times&quot; , &quot;times new roman&quot; ,
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imageanchor="1" style="margin-left: 1em; margin-right: 1em;"></a></span></b></div>

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, sans-serif; text-align: left;">&nbsp;</span><a  
href="https://mfachriraisulamin183033.blogspot.com/p/tugas-pendahuluan-modul-1\_27.html  
#" style="font-family: times, &quot;times new roman&quot;, serif; text-align:  
left;">[Kembali]</a><br />  
<br /></div>

</div>  
<div class="separator" style="clear: both; text-align: center;">  
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<div style="text-align: center;">  
<span style="font-family: &quot;arial&quot; , &quot;helvetica&quot; , sans-serif;">Video.  
Prinsip Kerja Rangkain Percobaan 1</span></div>  
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<span style="font-family: &quot;arial&quot; , &quot;helvetica&quot; , sans-serif;"><br  
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<span style="font-family: &quot;arial&quot; , &quot;helvetica&quot; , sans-serif;">Video.  
Prinsip Kerja Rangkain Percobaan 2</span></div>

<div class="separator" style="clear: both; text-align: center;">  
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<div style="letter-spacing: normal; text-transform: none; white-space: normal; word-spacing:  
0px;">

<span style="color: #444444; font-family: "quot";"><span style="color: #444444; font-family: "times" , "times new roman" , serif;"></span></span></div>  
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</span><div class="MsoNormal" style="font-style: normal; font-variant: normal; font-weight: 400; letter-spacing: normal; line-height: normal; text-align: left; text-decoration: none; text-indent: 0px; text-transform: none; white-space: normal; word-spacing: 0px;">  
</div>  
<span style="font-family: "times" , "times new roman" , serif;"><b></b><i></i><u></u><sub></sub><sup></sup><strike></strike></span></li></ul>  
</div>  
<span style="font-family: "times" , "times new roman" , serif;">4. <a href="#" name="Analisa">Analisa</a>&nbsp;<a href="https://mfachriraisulamin183033.blogspot.com/p/tugas-pendahuluan-modul-1\_27.html#">[Kembali]</a></span></div>  
<span style="font-family: "times" , "times new roman" , serif;"><span style="font-family: "arial" , "helvetica" , sans-serif;"><br /></span></span><br />  
<span style="font-family: "arial" , "helvetica" , sans-serif;"><b>Percobaan 1</b></span><br />  
<span style="font-family: "arial" , "helvetica" , sans-serif;">1. Apa pengaruh jika salah satu input gerbang logika ganti dengan clock (clk)?</span><br />  
<div class="MsoListParagraphCxSpFirst" style="margin-left: 2.0cm; mso-add-space: auto; mso-list: l0 level1 lfo1; text-align: justify; text-indent: -18.0pt;">  
<!--[if !supportLists]--><span style="font-family: "times new roman" , "serif"; font-size: 12.0pt; line-height: 115%;">a)<span style="font-family: "times new roman"; font-size: 7pt; font-stretch: normal; line-height: normal;">&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;</span></span><!--[endif]--><span style="background: white; font-family: "times new roman" , "serif"; font-size: 12.0pt; line-height: 115%;">Gerbang NOT</span><span style="font-family: "times new roman" , "serif"; font-size: 12.0pt; line-height: 115%;"><o:p></o:p></span></div>  
<div class="MsoListParagraphCxSpMiddle" style="margin-left: 2.0cm; mso-add-space: auto; text-align: justify;">  
<span style="background: white; font-family: "times new roman" , "serif"; font-size: 12.0pt; line-height: 115%;">Pada saat B1 diberi input 1, maka outputnya 0, karena pada gerbang logika NOT hasil output merupakan kebalikan dari input.</span><span style="font-family: "times new roman" , "serif"; font-size: 12.0pt; line-height: 115%;"><o:p></o:p></span></div>

<div class="MsoListParagraphCxSpMiddle" style="margin-left: 2.0cm; mso-add-space: auto; text-align: justify;">

<br /></div>

<div class="MsoListParagraphCxSpMiddle" style="margin-left: 2.0cm; mso-add-space: auto; mso-list: l0 level1 lfo1; text-align: justify; text-indent: -18.0pt;">

<!--[if !supportLists]--><span style="font-family: "times new roman" , "serif"; font-size: 12.0pt; line-height: 115%;">b)<span style="font-family: "times new roman"; font-size: 7pt; font-stretch: normal; line-height: normal;">&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;</span></span><!--[endif]--><span style="background: white; font-family: "times new roman" , "serif"; font-size: 12.0pt; line-height: 115%;">Gerbang AND</span><span style="font-family: "times new roman" , "serif"; font-size: 12.0pt; line-height: 115%;"><o:p></o:p></span></div>

<div class="MsoListParagraphCxSpMiddle" style="margin-left: 2.0cm; mso-add-space: auto; text-align: justify;">

<span style="background: white; font-family: "times new roman" , "serif"; font-size: 12.0pt; line-height: 115%;">Pada saat B =0, maka outputnya 0 atau LED OFF. Sesuai teori pada gerbang AND yaitu output 0 apabila input yang diberikan 0.</span><span style="font-family: "times new roman" , "serif"; font-size: 12.0pt; line-height: 115%;"><o:p></o:p></span></div>

<div class="MsoListParagraphCxSpMiddle" style="margin-left: 2.0cm; mso-add-space: auto; text-align: justify;">

<span style="background: white; font-family: "times new roman" , "serif"; font-size: 12.0pt; line-height: 115%;">Pada saat B1=1, maka outputnya 1 dan LED akan ON sesuai clock, karena saat clock berlogika 1 dan B1 juga berlogika 1 maka output yang dihasilkan 1. Saat clock bernilai 0, maka gerbang akan berlogika 0.&nbsp;&nbsp;&nbsp;</span><span style="font-family: "times new roman" , "serif"; font-size: 12.0pt; line-height: 115%;"><o:p></o:p></span></div>

<div class="MsoListParagraphCxSpMiddle" style="margin-left: 2.0cm; mso-add-space: auto; text-align: justify;">

<br /></div>

<div class="MsoListParagraphCxSpMiddle" style="margin-left: 2.0cm; mso-add-space: auto; mso-list: l0 level1 lfo1; text-align: justify; text-indent: -18.0pt;">

<!--[if !supportLists]--><span style="font-family: "times new roman" , "serif"; font-size: 12.0pt; line-height: 115%;">c)<span style="font-family: "times new roman"; font-size: 7pt; font-stretch: normal; line-height: normal;">&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;</span></span><!--[endif]--><span style="background: white; font-family: "times new roman" , "serif"; font-size: 12.0pt; line-height: 115%;">Gerbang OR</span><span style="font-family: "times new roman" , "serif"; font-size: 12.0pt; line-height: 115%;"><o:p></o:p></span></div>

<div class="MsoListParagraphCxSpMiddle" style="margin-left: 2.0cm; mso-add-space: auto; text-align: justify;">

<span style="background: white; font-family: "times new roman" , "serif"; font-size: 12.0pt; line-height: 115%;">Pada saat B1=0, maka

output LED sesuai dengan clock, karena sesuai teori gerbang OR akan berlogika 1 jika salah satu inputnya berlogika 1, dan berlogika 0 jika semua inputnya 0.

Pada saat  $B_1=1$ , maka output LED selalu ON, karena gerbang OR akan berlogika 1 jika salah satu atau kedua inputnya berlogika 1.

d) Gerbang XOR

Pada saat  $B_1=0$ , maka output LED sesuai dengan clock, karena pada gerbang XOR akan berlogika 1 jika inputnya berbeda.

Pada saat  $B_1=1$ , maka output LED berlawanan dengan clock, karena gerbang XOR akan berlogika 1 jika inputnya berbeda. Pada awal clock berlogika 0 dan B berlogika 1, maka outputnya berlogika 1.

Gerbang NAND

Pada saat  $B_1=0$ , maka output LED akan selalu ON, karena pada gerbang NAND akan berlogika 1 jika salah satu inputnya 0 dan akan berlogika 0 jika kedua inputnya 1. Prinsip NAND berkebalikan dengan AND.

Pada saat  $B_1=1$ , maka output LED berlawanan dengan clock, karena pada saat input berlogika 1 dan  $B_1$  juga berlogika 1 maka outputnya berlogika 0.

Gerbang NOR

Pada saat  $B_1=0$ , maka output LED berlawanan dengan clock, karena pada gerbang NOR akan berlogika 1 jika kedua input berlogika 0. Prinsip NOR berkebalikan dengan OR.

margin-left: 1em;"></a><a href="" imageanchor="1" style="clear: right; float: right; margin-bottom: 1em; margin-left: 1em;"></a><br />

<span style="background-color: white; font-family: "times new roman";, serif; font-size: 12pt;">Pada saat B1=1, maka output LED OFF, karena pada gerbang NOR akan berlogika 0 jika salah satu inputnya berlogika 1.</span></div>

<div class="MsoListParagraphCxSpMiddle" style="text-align: justify;"><br /></div>

<div class="MsoListParagraphCxSpMiddle" style="margin-left: 2.0cm; mso-add-space: auto; mso-list: l0 level1 lfo1; text-align: justify; text-indent: -18.0pt;">

<!--[if !supportLists]--><span style="font-family: "times new roman";, "serif"; font-size: 12.0pt; line-height: 115%;">g)<span style="font-family: "times new roman"; font-size: 7pt; font-stretch: normal; line-height: normal;">&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;</span></span><!--[endif]--><span style="background: white; font-family: "times new roman";, "serif"; font-size: 12.0pt; line-height: 115%;">Gerbang XNOR</span><span style="font-family: "times new roman";, "serif"; font-size: 12.0pt; line-height: 115%;"><o:p></o:p></span></div>

<div class="MsoListParagraphCxSpMiddle" style="margin-left: 2.0cm; mso-add-space: auto; text-align: justify;">

<span style="background: white; font-family: "times new roman";, "serif"; font-size: 12.0pt; line-height: 115%;">Pada saat B1=0, maka output LED berlawanan dengan clock, karena pada gerbang XNOR akan berlogika 1 jika kedua inputnya berlogika sama. Gerbang XNOR merupakan kebalikan dari XOR. Pada awal clock berlogika 0 dan B1 berlogika 0 maka outputnya 1.</span><o:p></o:p></div>

<br />

<div class="MsoListParagraphCxSpLast" style="margin-left: 2.0cm; mso-add-space: auto; text-align: justify;">

<span style="background: white; font-family: "times new roman";, "serif"; font-size: 12.0pt; line-height: 115%;">Pada saat B1=1, maka output LED sesuai dengan clock. Jadi, pada saat clock berlogika 1 dan B1 juga berlogika 1 maka outputnya 1.</span><span style="font-family: "times new roman";, "serif"; font-size: 12.0pt; line-height: 115%;"><o:p></o:p></span></div>

<div class="MsoListParagraphCxSpLast" style="margin-left: 2.0cm; mso-add-space: auto; text-align: justify;">

<span style="background: white; font-family: "times new roman";, "serif"; font-size: 12.0pt; line-height: 115%;"><br /></span></div>

<span style="font-family: "arial";, "helvetica";, sans-serif;">2. Buat rangkaian dasar dari gerbang logika AND dan jelaskan prinsip kerjanya !</span><br />

<span style="font-family: "arial";, "helvetica";, sans-serif;"><br /></span>

<br />

<div class="separator" style="clear: both; text-align: center;">

<a href="https://1.bp.blogspot.com/-o\_mNhOJ\_9aI/Xqr7d89RW0I/AAAAAAAAAfw/LI8d8Qpiz3c

Z9H7kbEiWvWdiV8kw444JgCLcBGAsYHQ/s1600/Rangkaian%2BDasar%2BAND.png" imageanchor="1" style="margin-left: 1em; margin-right: 1em;"></a></div>

<div class="separator" style="clear: both; text-align: center;">

Gambar 4. Rangkaian Dasar Gerbang Logika AND</div>

<div class="separator" style="clear: both; text-align: left;">

Prinsip Kerja :</div>

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

<span style="font-family: &quot;Times New Roman&quot;; serif; font-size: 12pt; line-height: 115%;">Pada rangkaian ini merupakan rangkaian dasar dari gerbang logika AND. Disini menggunakan logic state untuk memasukkan logika nilai inputnya dan terdapat sumber arus . <o:p></o:p></div>

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

<span style="font-family: &quot;Times New Roman&quot;; serif; font-size: 12pt; line-height: 115%;">ketika logic state berlogika '0' keduanya maka arus dari R1 akan terbagi ke D1,D2 dan D3 sehingga LED tidak menyala. Ketika logic state bernilai logika '1' dan '0' arus dari R1 akan terbagi juga sehingga arus yang mengalir ke R2 tidak cukup untuk menyalakan LED . sedangkan jika logicstate berlogika '1' keduanya. Maka arus akan mengalir dari R1 dan terbagi ke D1,D2&nbsp; dan R2 , sehingga R2 memiliki tegangan yang cukup untuk menyalakan LED.<o:p></o:p></span></div>

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

<br /></div>

<div class="separator" style="clear: both;">

</div>

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

<span style="font-family: &quot;Times New Roman&quot;; serif; font-size: 12pt; line-height: 115%;">Dari Prinsip tersebut dapat dilihat bahwa bahwa rangkaian tersebut menggunakan prinsip gerbang logika AND, dimana ketika Logika inputnya berlogika keduanya '1' maka output nya akan berlogika '1'&nbsp; (menyala).</span><span style="font-family: &quot;Times New Roman&quot;;&quot;serif&quot;; font-size: 12.0pt; line-height: 115%;"><o:p></o:p></span></div>

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

<span style="font-family: &quot;Times New Roman&quot;; serif; font-size: 12pt; line-height: 115%;"><br /></span></div>

<div class="separator" style="clear: both; text-align: left;">

<b>Percobaan 2</b></div>

[illegible]