

MKALAMA DISTRICT COUNCIL  
FORM TWO MOCK EXAMINATION 2025  
PHYSICS MARKING SCHEME

1

i	ii	iii	iv	v	vi	vii	viii	ix	x
D	A	C	A	D	C	B	C	A	C

**@1Mark =10marks**

2

i.	ii.	iii.	iv.	v.
C	E	G	A	F

**@1Mark =5marks**

3.

**a.**

- i. Do not overheat magnets
- ii. Do not store or keep magnets near strong magnetic or electric fields. **@2Marks =6marks**
- iii. Store magnets in pairs with the unlike poles facing each other.

**b.**

- i. Magnetic recording media
- ii. Credit debit and ATM cards **@1Mark =4marks**
- iii. Common television and computer monitors
- iv. Speakers and Microphones

4.

**a.**

Magnetization	Demagnetization
Process of making magnet	Process of destroying the magnetism in a magnetized material.
<b>4marks</b>	

**b.**

- i. If a permanent magnetism is heated or vibrated in the absence of an external field. **6marks**
- ii. Randomly stroking one magnet with another can magnetise the magnet being stroked
- iii. Repeated hammering or dropping down the magnet.

5.

**a.**

capacitor	Capacitance
Device used to store electric charge	Ability of a capacitor to store electric charge

**4marks**

**b.**

- i. Paper or plastic capacitors
- ii. Mica capacitor **3marks**
- iii. Electrolytic capacitor

**c.** "Like charge repel, unlike charge attract." **3marks**

6. **a. Data given**  
 capacitance=0.5F  
 p.d= 18volts  
 amount of charge = required  
 from Amount of charge = CV  

$$=0.5F \times 18V$$

$$= 9C$$

**5marks**

- b Data given**  
 Capacitance of capacitor  $C_1 = 5\mu F$   
 Capacitance of capacitor  $C_2 = 10\mu F$   
 Capacitance of capacitor  $C_3 = 15\mu F$   
 From  $1/C_T = 1/C_1 + 1/C_2 + 1/C_3$   

$$1/C_T = 1/5 + 1/10 + 1/15$$

$$1/C_T = 0.667$$

$$C_T = 1.499 \mu F$$
 Value of a single capacitor to replace is 1.499  $\mu F$

**5marks**

7. **a.**  
**Data given.**  
 VR = 5  
 Efficiency = 80%  
 Load = 200N  
 Effort = Required  
 From Efficiency = MA/VR X 100%  

$$80 = MA/5 \times 100$$

$$MA = 4$$
 From MA = Load/Effort  

$$4 = 200N/\text{Effort}$$
**Effort = 50N**

**6marks**

- b.** Because some of effort applied is used to overcome frictional forces in the moving parts of the system.

**4marks**

8. a. a long spanner produce large moment of force than short spanner

8 (b) (i)

Anticlockwise rotation

50cm

2kg

15cm

8cm

25cm

Mass of the rule

5 Marks

(ii) Mass of the meter half meter rule = Required:

From  $S.A.M = S.C.M$

$4kg \times 15cm = 8cm \times M$

Mass of the rule  $(M) = 7.5g$

5 marks

9.

**a.**

Data given

Load = 400N

Effort = 100N

MA = Required

MA = Load/Effort

400N/100N

**MA = 4.**

**4marks**

**b.** Data given

Distance moved by Effort = 10m

Distance moved by Load = 2m

MA = 4

VR = required

Efficiency = required

From VR = Distance moved by/Effort /Distance moved by Load

VR = 10m/2m

**VR = 5**

**3marks**

Efficiency = MA/VR X 100%

= 4/5 X 100%

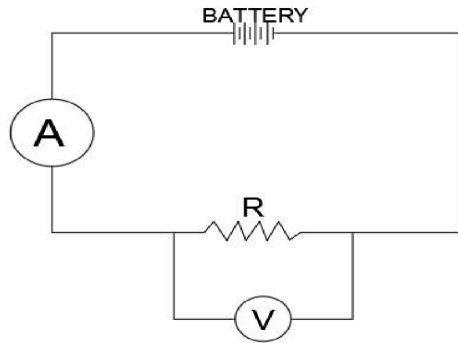
**Efficiency = 80%**

**3marks**

10. a.  
Ammeter  
Voltmeter  
Connecting wire  
Dry cell  
Resistor

**5marks**

b.



**5marks**

c. .Ammeter is connected in series with the resistor to measure the current flowing through the resistor

Voltmeter is connected in parallel across the resistor to measure potential difference across it

**5marks**