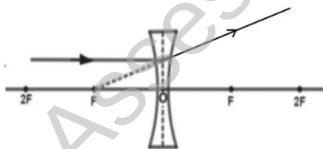
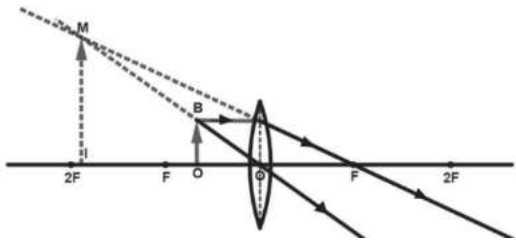


Summative Assessment – III -2025-26
Model Question Paper
PHYSICS - X
Answer key

SET - A

Qn No	Answer	Score	Total Score
SECTION A			
1	b) i and iii	1	1
2	a) Both Statement and reason are correct, and the reason explains the Statement.	1	1
3	b) 200 J	1	1
4	b) 1 – iv, 2- iii, 3 – ii, 4 - i	1	1
SECTION B			
5A	Persistence of Vision Correct Explanation	1 1	2
5B	Yellow Blue Correct Explanation	1 ½	2
6	$d = \frac{(v \times t)}{2}$ $= \frac{(1500 \text{ m/s} \times 4\text{s})}{2}$ $= 3000 \text{ m}$	1 1	2
7	a) Concave lens is a diverging lens b) 	1 1	2
8	a) Towards Q b) Change the poles of the ring magnet OR Change the terminals of the battery	1 1	2
9	$P = \frac{V^2}{R}$ $V = \sqrt{(P \times R)}$ $V = \sqrt{(120 \text{ W} \times 30 \Omega)}$ $= \sqrt{3600}$ $= 60 \text{ V}$	1 1	2

10	a) DC source is connected in primary circuit. Correct explanation b) Connect AC source instead of DC	1 1	2
11A	Mechanical advantage = $\frac{\text{Radius of wheel}}{\text{Radius of axle}}$ $= \frac{0.8 \text{ m}}{0.2 \text{ m}} = 4$ Force required = $\frac{\text{Load}}{\text{Mechanical advantage}}$ $= \frac{500 \text{ kg} \times 9.8 \text{ m/s}^2}{4}$ $= 1225 \text{ N}$	1 1	2
11B	OR Mechanical Advantage (MA) = $\frac{\text{Length}}{\text{Height}}$ $= \frac{5 \text{ m}}{3 \text{ m}}$ $= 1.67$	1 1	2
SECTION C			
12A	a) amplitude, $a = 0.2 \text{ m}$ b) Number of vibrations of the particles of the medium in 1s frequency, $f = \frac{3}{3} = 1 \text{ Hz}$ c) $T = \frac{1}{f} = 1 \text{ s}$	1 1 1	3
12B	a) Transverse wave or Longitudinal b) $v = f\lambda$ c) Distance travelled by the wave in 1s $= 2\text{Hz} \times 40\text{m} = 80 \text{ m/s}$	1 1 1	3
13	a) Convex Lens, any correct justification b) 	1 2	3

SECTION D			
18 A	a) South	1	4
	b) Correct Explanation	1	
	c) Any two methods	2	
18 B	a) Negative	1	4
	b) No Change	1	
	c) B	1	
	d) Strength can be increased/ Poles can be changed	1	

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