PHYSICS CBSE -06(SOLUTION)

Full Marks : 70

Pass Marks : 21 **Time : Three ho**

Q.No	Answer	Q.NO	Answer	Q.No	Answer	Q.No	Answer
1	B	8	B	15	B	30	
2	B	9	C	16	C	i	A
3	C	10	D	29.		Ii	B
4	B	11	B	i	B	Iii	C
5	D	12	A	ii	D	iv	D
6	B	13	A	iii	B		
7	D	14	D	iv	A		

17. Faradays laws statements (2M)

(OR) Self-induction definition (1M)

Equation , $L = (\mu_0 N^2 A / l)$, (1M)

18. Ray diagram of compound microscope (2M)

19. Any two differences (1mark each)

20.i) Metal A, as it has higher threshold frequency

ii) slope is common for them, which gives Planks constant.

21.two definitions , (1M each)

22.$\varphi_E = Q / \varepsilon_0 = 2 \times 10^6 \ Nm^2/C$ (1+1/2)

$E = (\varphi_e / 6 A) = = 2 \times 10^8 \ N/C$ (1+1/2)

23. Amperes circuital law equation (1), labelled diagram (1/2), derivation (1.5)

24.i) Mutual induction (1M)

ii) any two loses (½ mark each)

iii) electrical energy is transmitted as high voltage and low current to avoid loss of energy during transmission.

25.$\cos\theta = R/Z$, $Z = \sqrt{(R^2 + X_l^2)}\ \Omega$, $e_{rms} = i_{rms}\ Z$

$R = Z/2 = 25\Omega$, $X_L = \sqrt{1875} = 43.3\Omega$

26. UV radiation (1M), Two uses (1M each)

27.Labelled diagram (1M) , derivation (2M)

(OR) Principle- TIR (1M) , labelled diagram (1 M) , explanation (1M)

28.Labelled circuit diagram (1M), Graphs (1M) , explanation (1M)

31.i) principle, $C = Q/V$ (1/2M) , ii) Derivation (2M) , iii) electric field energy (1/2

(OR) i) diagram (1M) , ii) derivation (2M) , iii) two properties (1M each)

32.i) labelled diagram (1M) , derivation (2M) , ii) $B = (u_0 NI/ 2r) =$ (equation and calculation 1M each)

(OR) i) principle , equation , $T = BINA \cos\theta$ (2M) , ii) Significance of RMF (1M) ,

iii) $I_g \times R_g = I_s \times R_s$ (1M)

Let, $I = 100$, $I_g = 10$, $I_s = 90$, then , $R_s = 5\Omega$ (1 M)

33. i) labelled diagram and graph (1+1) , derivation (2M)

ii) $d = A(n - 1)$, $d = 3^0$ (1M)

(OR) i)Two graphs(½ each) , Two differences (1M each)

ii) Bright image, $x_2 = (n\lambda D/d) = 0.8mm$ (1M)

Dark image , $x_3 = (2n- 1)(\lambda D /2d) = 2mm$, (1M)