

ANSWER KEY

SECOND YEAR HIGHER SECONDARY ^{SAY/IMP} EXAMINATION June 2023

PART-I/II/III ✓

SUBJECT: physics

CODE NO: S-2263

VERSION:

60 SCORES

2 HOURS

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
1.		b. $1.602 \times 10^{-19} \text{ C}$		1
2.		a.		1
3.		True		1
4.		d. $\oint \mathbf{B} \cdot d\mathbf{l} = \mu_0 i_c + \mu_0 \epsilon_0 \frac{d\phi_E}{dt}$		1
5.		b. diopter		1
6.		True		1
7.		b.		
8.		Definition / equation		2
9.		state ment OR equation explanation of terms $V \rightarrow$ Voltage $R \rightarrow$ resistance $I -$ current	1 1 1	2
10.		Definition / equation		2
11.		$V = V_0 \sin \omega t$ correct derivation OR $V = V_0 \sin \omega t$ $I = I_0 \sin(\omega t - \pi/2)$ If figure only	2 1 1 1	2

No	Qns	Answer Key/Value Points	Score	Score
12.		any two uses		2
13		statement		2
14		any two spectral lines		2
15	a.	correct definition	2	3
	b.	equipotential surface of any shape	1	
16		Definition / equation explanation of terms	2 1	3
17		1st law 2nd law	1 1/2 1 1/2	3
18	a.	correct definition	1	3
	b	any two uses	2	
19.		$E = h\nu$ $= 6.63 \times 10^{-34} \times 6.0 \times 10^{14}$ $= 3.98 \times 10^{-19} \text{ J}$ unit not necessary.	1 1 1	3
20		differentiate with minimum one fact. of each OR definition of fission and and fusion.	3 3	3

No	Qns	Answer Key/Value Points	Score	Score
21	a.	Redraw the circuit with correct change of diode	2	3
	b.	correct output	1	
22	a.	statement / equation	2	4
	b.	correct derivation	2	
		OR	1	
		figure final equation	1	
23	a.	correct circuit diagram	2	4
	b.	correct derivation	2	
		OR $\frac{P}{Q} = \frac{R}{S}$ or any form	1	
24	a.	correct differentiation with minimum one fact.	2	4
		OR		
		explanation of dia magnetism	1	
		explanation of para magnetism	1	
	b.	any two example	2	

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
25		Ray diagram	2	4
		correct derivation	2	
		OR $\frac{1}{f} = \frac{1}{v} + \frac{1}{u}$	1	
		OR derivation of $\frac{1}{f} = \frac{1}{v} + \frac{1}{u}$ only	3	
26	a.	correct derivation	3	5
		OR Figure final equation	1 1	
	b.	equation $\frac{1}{c} = \frac{1}{c_1} + \frac{1}{c_2}$ OR $c = \frac{c_1 c_2}{c_1 + c_2}$	1	
	 1-1 hr	1	
27	a.	statement / equation	2	5
		correct derivation	3	
	b.	OR Figure	1	
		final equation	1	

Q. No	Sub Qns	Answer Key/Value Points	Score	Total Score
28	a.	Primary	1	5
		secondary	1	
	b.	$\frac{V_s}{V_p} = \frac{N_s}{N_p}$ OR $N_s = \frac{V_s N_p}{V_p}$	1	
		$= \frac{230 \times 4000}{2300}$	1	
	$= 400 \text{ turns}$	1		
29	a.	correct diagram	2	5
	b.	correct derivation	3	
		OR if final equation only	1	