

ANSWER KEY

11th YEAR HIGHER SECONDARY EXAMINATION March 2022

PART-I/II/III

SUBJECT: Physics (HD)

CODE NO: ~~84-63~~ 84-63

VERSION: Q

60 SCORES

2 HOURS

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
		Part I		
A 1.		a. $V = \frac{1}{4\pi\epsilon_0} \frac{Q}{r}$		1
2.		b. Am^2		1
3		scalar		1
4		a. wave front		1
5		c. Bohr		1
6		a. Chadwick		1
7		c. atomic mass unit		1
8		e. Arsenic (As)		1
9		b. diode		1
B 10		True		1
11		a. J.J. Thomson		1
12		Nuclear fusion		1
13		b. $E_g > 3 \text{ eV}$		1

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
		Part II		
A	14	any two uses		2
	15	Definition		2
	16	any two postulates		2
	17	statement		2
B	18	$\frac{2B}{2\pi m}$		2
	19	any two properties		2
	20	Definition		2
		Part III		
A	21	a. Definition	2	3
		b. any one advantage	1	
	22	Definition and equation	3	2
		Definition or equation only	2	3
	23	correct derivation	3	3
		equation only	2	
	24	correct representation		3
B	25	any three properties		3
	26	correct derivation	3	3
		equation only	2	

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
27		substitution and final answer with tolerance answer only OR with out tolerance (ans $\pm 5\%$)	3 2	3
A	28	<u>Part IV</u> a. Series	1	4
		b. correct calculation, substitution and final answer OR equation only / answer only	3 2	
	29	statement correct explanation OR equation only	2 2 2	
30	a. Dip, declination, Horizontal intensity b. definition	3 1	4	
31.	correct expression (Fig not necessary) OR Fig / equation	4 2	4	
B	32	a. mutual induction	1	4
		b. $\frac{N_s}{N_p} = \frac{V_s}{V_p}$ OR $V_s = \frac{N_s V_p}{N_p}$	1	
		substitution $V_s = \frac{1000 \times 12}{500}$	1	
		final answer = 24V	1	

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
33	a.	Definition of equation	2	4
	b.	$P = \frac{1}{f}$ substitution with answer	1 1	
34		<u>Part V</u>		
	a.	statement of equation	2	6
	b.	correct derivation	4	
	OR Final equation only	2		
35	a.	statement	2	6
	b.	circuit diagram	2	
		explanation OR final equation	2	
36		correct figure	3	6
		derivation for derivation	3	