Kendriya Vidyalaya Sangathan, Lucknow Region
Session-2022-23
Class-11th
Subject-Physics (Theory)

Marking Scheme

Maximum Marks: 70 Marks Time Allowed: 3 hours.

Section-A

Q. No	Answer /Value points	Marks
1	(a)	1
2	(a)	1
3	(c)	1
4	(c)	1
5	(a)	1
6	(a)	1
7	(c)	1
8	(d)	1
9	(b)	1
10	(b)	1
11	(b)	1
12	(a)	1
13	(a)	1
14	(a)	1
15	(b)	1
16	(a)	1
17	(c)	1
18	(a)	1

Section-B

19	Two factors	1,1
20	Distance Displacement OR Formation of equations Solution	1 1 1 1
21	Formula Solution Correct answer OR Diagrams Proof	½ 1 ½ 1 1
22	Calculation of potential energy of spring and ball solution	1 1
23	Wavelength =2L/5 Frequency =5 Hz	1 1
24	Formula Solution Correct answer	½ 1 ½
25	Formula Solution Correct answer	½ 1 ½

Section-C

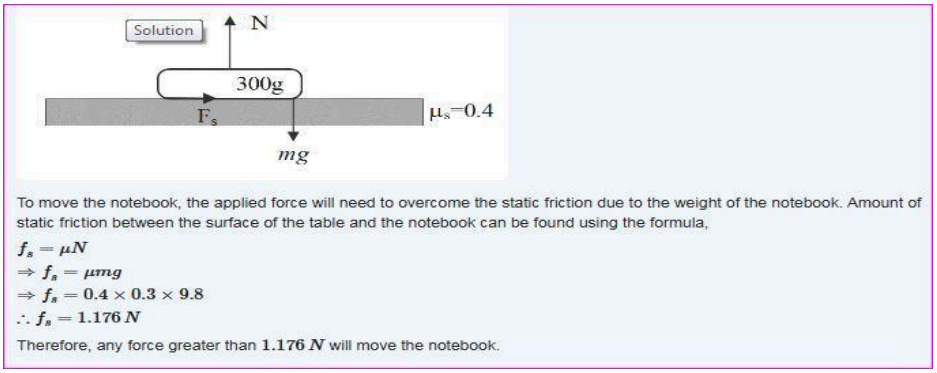
26	Statement Proof	1 2
27	Acceleration Graph OR Definition Acceleration Tensions	2 1 1 1 1
28	Definition Proof OR Definition Diagram Proof	½ ,½ 2 ½ ½ 2
29	Definition Relation	1 2
30	Formula Correction	1 2

Section-D

31	**Statement** **Diagram** **magnitude** **Direction** **OR** **(i) Diagram** **Proof** **(ii) (a)The range of the body** **(b) The maximum height attained by the body.**	1 1 2 1 1 2 1 1
32	**Statement** **Diagram** **Proof** **Applications** **OR** Definition Diagram Proof	1 1 2 1 1 1 3
33	Definition **Characteristics** **KE** **PE** **Proof** **OR** Definition Conditions Proof	1 1 1 1 1 1 1 3

Section-E

34	(i) Correct answer (ii) Correct formula (iii) Two difference	1 1 1,1

	OR Correct formula	1 ,1
35	(i) Action and Reaction (ii) Correct Definition Correct answer: A $F = \frac{dp}{dt}$ $\Rightarrow Fdt = dp = p_2 - p_1$ $\Rightarrow 300 \times 1 = mnv - 0$ $\Rightarrow n = \frac{300}{0.05 \times 1200}$ $\therefore n = 5$ OR  To move the notebook, the applied force will need to overcome the static friction due to the weight of the notebook. Amount of static friction between the surface of the table and the notebook can be found using the formula, $f_s = \mu N$ $\Rightarrow f_s = \mu mg$ $\Rightarrow f_s = 0.4 \times 0.3 \times 9.8$ $\therefore f_s = 1.176\,N$ Therefore, any force greater than $1.176\,N$ will move the notebook.	1 1 ½ 1 ½ ½ 1 ½