



Model Question Paper

Physics

Class: IX going to X

Time: 22.5 mints

Marks: 60

SECTION I

This section contains 2 (Two) Questions

8

- The answer to each question is a SINGLE DIGIT INTEGER ranging from 0 to 9, that you have to choose the correct one (ONLY ONE) from options given.
- Correct answer : + 4, No answer : 0 and Incorrect answer : - 1

1. A train starting from rest attains a velocity of 72 kmph in 5 minutes; the distance travelled by the train during the time, in kilometers

- (A) 3 (B) 4
(C) 2 (D) 1

2. The mass of an object on the surface of earth is 6 kg, its mass on the surface of moon ($g_{\text{earth}} = 6 g_{\text{moon}}$)

- (A) 1 kg (B) 3 kg
(C) 9 kg (D) 6 kg

SECTION II

This section contains 3 (Three) Questions

12

- Each question has 4 (Four) options : A, B, C and D. **One or more than one** of these four option(s) is(are) correct answer(s).
- Correct answer : + 4, No answer : 0 and Incorrect answer : - 1

3. Pressure can be expressed with following unit(s)
- (A) pascal (B) torr
(C) bar (D) mmHg
4. The relative density of an object is D . The object floats for
- (A) $D < 1$ (B) $D = 1$
(C) $D > 1$ (D) None of the above
5. The work done by a mechanical agent is zero for
- (A) applied force $\neq 0$, displacement = 0
(B) applied force $\neq 0$, displacement $\neq 0$, force and displacement are mutually perpendicular
(C) applied force = 0, displacement $\neq 0$
(D) force and displacement are acting in opposite directions

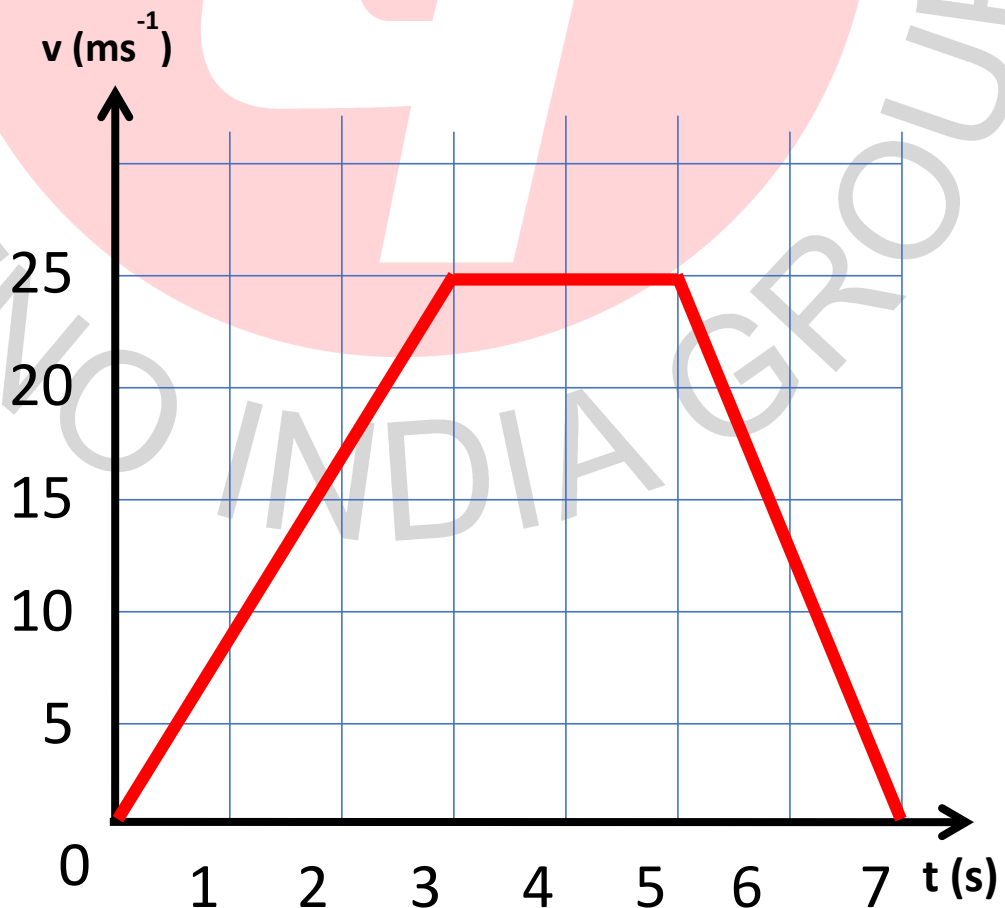
SECTION III

This section contains **10 (Ten)** Questions

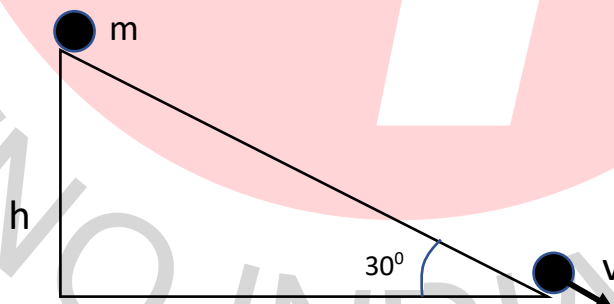
40

- Each question has **4 (Four)** options : A, B, C and D. **One** of these four options is correct answer.
- Correct answer : + **4**, No answer : **0** and Incorrect answer : - **1**

6. A speed-time graph is shown for a moving car. The ratio of distance travelled by the car during first three seconds to the total distance travelled in seven seconds



- (A) 3 : 1 (B) 1 : 3
 (C) 2 : 3 (D) 2 : 5
7. The pressure of a liquid at a depth does not depend on
 (A) the depth of the liquid (B) the place
 (C) the density (D) the quantity
8. A ship sends out ultrasound that returns from the seabed and is detected once again after 3 s. If the speed of ultrasound through seawater is 1530 ms^{-1} , the depth of seabed there is
 (A) 2500 m (B) 2295 m
 (C) 3060 m (D) 3200 m
9. On which factor speed of sound through gas does not depend?
 (A) temperature (B) density
 (C) humidity (D) pressure
10. The speed of yellow light (600 nm) is $3 \times 10^8 \text{ ms}^{-1}$. Its frequency is
 (A) $4 \times 10^{14} \text{ Hz}$ (B) $5 \times 10^{14} \text{ Hz}$
 (C) $6 \times 10^{14} \text{ Hz}$ (D) $2 \times 10^{14} \text{ Hz}$
11. The velocity of the ball of mass m at the base, released at the highest point on a smooth inclined plane (30°) at a height h from the horizontal ground, is



- (A) $\sqrt{2gh}$ (B) \sqrt{gh}
 (C) \sqrt{mgh} (D) $m\sqrt{2gh}$
12. 1 kg-wt force =
 (A) 981 N (B) 9.81 N
 (C) 981 dynes (D) None of the above

13. The velocity (v) and acceleration (a) of an object at the highest point (of height H), when thrown vertically upward from ground

(A) $v = 0, a = 0$

(B) $v = \sqrt{2gH}, a = 0$

(C) $v = 0, a = g$

(D) $v = 0, a = -g$

14. Two objects of masses M and m ($M > m$) have same momentum. Their respective kinetic energies are K and k .

(A) $K > k$

(B) $K < k$

(C) $K = k$

(D) Cannot be determined

15. Match the laws/principle of nature and relevant formula, given in two columns:

RULE		PHENOMENON	
A	Laws of motion	P	Apparent loss of weight of a body in a fluid is the weight of the displaced volume of the fluid
B	Law of Gravitation	Q	$F = ma$
C	Archimedes' Principle	R	$KE + PE = \text{constant}$
D	Principle of Conservation of Energy	S	$p = mv$
		T	$F = G \frac{m_1 m_2}{r^2}$

Correct Answer:

A. A-Q, B-T, C-P, D-R

B. A-T, B-S, C-R, D-Q

C. A-Q, B-P, C-T, D-S

D. A-P, B-Q, C-T, D-S