SAMPLE PAPER CLASS IX-2025

Time 1hr **MM 27**

General instruction:

a) All questions are compulsory.
b) Internal choice has been given in some question students have to attempt any one of them.
c) For MCQ and assertion and reasoning questions students are supposed to write correct option and correct answer both.

1) Which of the following describes an object in uniform motion? 1
(a) The object is accelerating (b) The object is at rest (c) The object is changing its direction
(d) The object covers equal distances in equal intervals of time

2) What is the effect of a force applied on a stationary object? 1
(a) It accelerates the object (b) It makes the object move
(c) It changes its shape (d) All of the mentioned.

3) When two forces act in opposite directions on a body, then net force acting on the body will be 1
(a) sum of two forces (b) difference of two forces (c) product of the two forces (d) none of these

4) km/s^2 is the unit of 1
(a) displacement b) acceleration (c) velocity (d) none of them

5) **Assertion:** The graph between two physical quantities P and Q is straight line, when P/Q is constant. 1
Reason: A straight line graph means that P is proportional to Q or P is equal to constant multiplied by Q.
a) Assertion and Reason both are true, and Reason is the correct explanation of Assertion.
b) Assertion and Reason both are true, but Reason is not the correct explanation of Assertion.
c) Assertion is true but Reason is false.
d) Assertion is false but Reason is true.

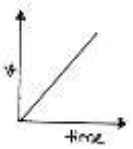
6) A car travels along a straight line for the first half time with speed of 50km/h and the second half time with speed of 60km/h. Find the average speed of the car. 2

7) Why the fireman has to hold the hose pipe firmly when they throw water on fire? 2

OR

Why a cricket player lowers his hand while taking a catch?

8) (i) Draw velocity time graph for the following
a) Object moving with constant velocity.
b) object is having uniform retardation.
(ii) If an object is having velocity time graph as in figure then draw the distance time graph for the same. 2+1



9) (a) What are balanced and unbalanced force? Give example for each.
(a) Two forces of 10N and 60N are acting on the object as in figure. Find the net force acting on the object and the direction in which it acts also find the acceleration produced in the object if its mass is 2kg. 3

10) (a) A force of 5 N produces an acceleration of 8 m/s^2 on a mass m_1 and an acceleration of 24 m/s^2 on a mass m_2. What acceleration would the same force provide if both the masses are tied together?
(b) State Newtons First law of motion. 2+1

11) (i) When a passenger sitting in the bus, and the bus starts suddenly. What will happen to the passenger? Explain. Name and state the property on which it depends.
(ii) An object of mass 25kg is moving with a velocity of 50 m/s is brought to rest by applying certain force. Find the magnitude of force acing on the object, how far the object will move before coming to rest. 5

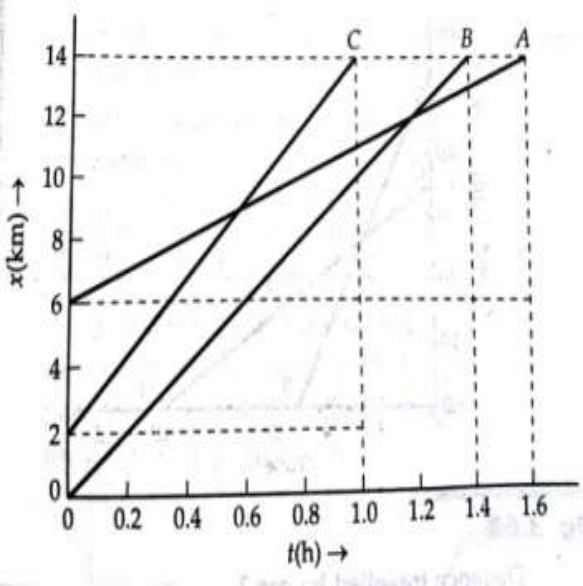
Prepared by WKP

OR

(a) Why a cricket player lowers its hand while taking a catch? Name and state the law on which the above example depends.

(b) A bullet of mass 25g is moving with a speed of 100m/s pierces a bag full of sand kept adjacent to a wall. The bullet stops in the bag after 0.05s. Find a) the acceleration of the bullet. b) The force exerted by the sand bag on the bullet. c) The distance covered by the bullet before coming to rest.

12) Three friends Amar. Akbar and Anthony are on a car race. They have marked their cars as A, B and C respectively. Figure shows the position-time graph of three cars A, B and C. On the basis of the graphs, answer the following questions:



(a) Which car has the highest speed and how much? 1

(b) Which car has the lowest speed and how much? 1

(c) When A passes C, where is B? Calculate how much distance each have travelled from their starting position? 2

OR

At what time and distance from the starting position the car A overtakes car B 2

Prepared by MKP