Chapter-1

Worksheet-1

Section 1

Q1. Explain point of reference. How does it affect motion?

Q2. Differentiate between Distance and Displacement. Give Examples

Q3. Differentiate between Uniform and Non-Uniform Motion. Give Examples

Q4. How does Velocity is different from Speed? How do we calculate average velocity?

Q5. Define Acceleration. What is SI unit of Acceleration?

Q6. What does slope of velocity-time graph represents?

Q7. Draw velocity-time graph for accelerated motion? Name the graph obtained.

Q8. What are the 3 equations of motion? Name each of them.

Q9. When do we say an object is in uniform circular motion? Explain.

Q10. What do you understand by centripetal force?

Section 2

Q11. A particle is moving in a circular path of radius r. The displacement after half a circle would be:

a) Zero
b) πr
c) $2r$

d) r/2

Answer: c

Q12. A body is thrown vertically upward with velocity u, the greatest height h to which it will rise is,

a) u/g
b) $u^2/2g$
c) u^2/g
d) u/g^2

Answer: b

Q13. The numerical ratio of displacement to distance for a moving object is

a) Always less than 1
b) Always equal to 1
c) Always more than 1
d) Equal to or less than 1

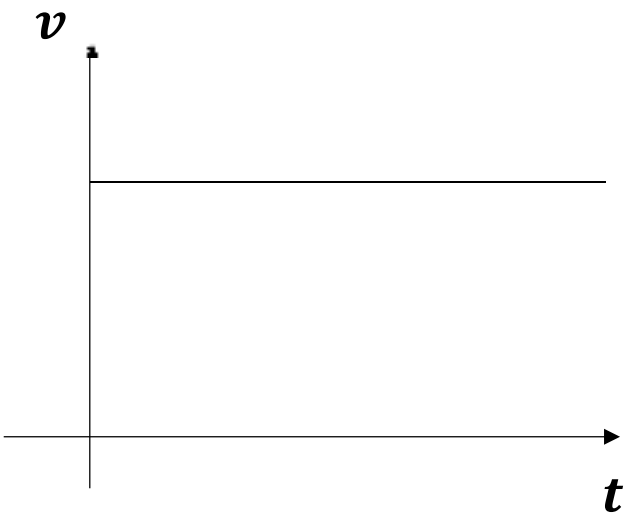
Answer: d

Q14. If the displacement of an object is proportional to square of time, then the object moves with

a) Uniform velocity
b) Uniform Acceleration
c) Increasing Acceleration
d) Decreasing Acceleration

Answer: b

Q15. From the given υ – t graph, it can be inferred that the object is



a) In uniform motion
b) At rest
c) In non-uniform motion
d) Moving with uniform acceleration

Answer: a

Q16. If a stone is tied to one end of the string and the sting is rotated by holding it from other side with a constant speed of 15 ms^{-1}. This means the stone is in

a) At rest
b) Moving with no acceleration
c) In accelerated motion
d) Moving with uniform velocity

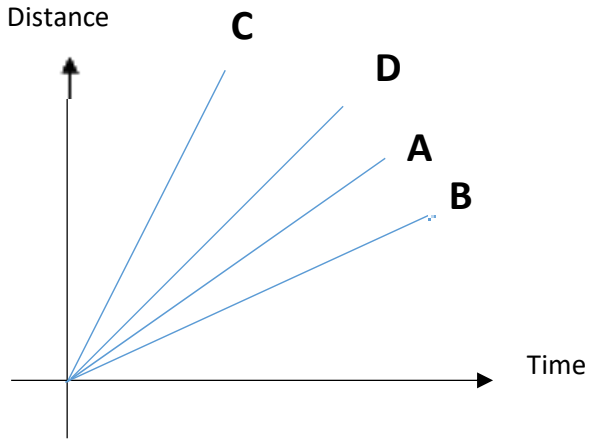
Answer: c

Q17. Area under $v - t$ graph represents a physical quantity. The SI unit of that quantity is:

a) m^2
b) m
c) m^3
d) ms^{-1}

Answer: b

Q18. Four cars A, B, C and D are moving on a levelled road. Their distance versus time graphs are shown in the adjacent figure. Choose the correct statement.



a) Car A is Faster than car D
b) Car B is the slowest
c) Car D is faster than car C
d) Car C is the slowest

Answer: b

Q19. Slope of a velocity-time graph gives

a) The distance
b) The displacement
c) The acceleration
d) The speed

Answer: c

Q20. In which of the following cases of motions, the distance moved and the magnitude of displacement are equal?

a) If the car is moving on a straight road
b) If the car is moving in Circular path
c) The pendulum is moving to and fro
d) The earth is revolving around the sun.

Answer: a