

Chapter 08-Test-01

Total Marks:30

Time:45 Min

Note: All question of 2 marks each. Solve all question

Q.1: A farmer moves along the boundary of a square field of side 10 m in 40 s. What will be the magnitude of displacement of the farmer at the end of 2 minutes 20 seconds from his initial position?

- (A) $10\sqrt{2}$ m
- (B) 10
- (C) 20
- (D) None

Q.2: An Object travels 16 m in 4 s and then another 16 m in 2 s. What is the average speed of object?

- (A) 5 m/s
- (B) 5.33 m/s
- (C) 12 m/s
- (D) None

Q.3: A man swim in 90 m long pool. He covers 180 m in one minute from one end to other and back on the same straight path. What is the average speed and velocity?

- (A) 3 m/s and 0 m/s
- (B) 0 m/s and 3 m/s
- (C) 1.5 m/s and 0 m/s
- (D) None

Q.4: which is not true ?

- (A) The acceleration is taken to be positive if it is in the direction of velocity
- (B) The acceleration is taken to be negative if it is opposite to the direction of velocity
- (C) SI unit of acceleration is m/s^2
- (D) Acceleration is negative for a accelerated motion of car.

Q.5: Which is not true?

- (A) The motion of a freely falling object is an example of uniform accelerated motion.
- (B) If a car travelling along straight road increases its speed by unequal amounts in equal intervals of time, then car is said to be moving with non-uniform motion.
- (C) If an object travels in a straight line and its velocity increases or decreases by equal amounts in equal intervals of time, Then the acceleration of the object is said to be uniform.
- (D) All above are false statement.

Q.6: Starting from a stationary position, a boy start to run attains velocity of 6 m/s in 30 s. Calculate the acceleration ?

- (A) 0.2 m/s^2
- (B) 0.1 m/s^2
- (C) 2.0 m/s^2

(D)None

Q.7: A bus decreases its speed from 80 km/h to 62 km/h in 5 s, what will be the acceleration of the bus ?

- (A) 1 m/ s^2
- (B) 0.1 m/ s^2
- (C) 2.0 m/ s^2
- (D) None

Q.8: The breaks applied to a car produce an acceleration 6 m/ s^2 in opposite to the direction of motion. If the car takes 2 s to stop after the application of breaks. Calculate the distance travelled during this time.

Q.9: A boat starting from rest on a lake accelerates in straight line at constant rate of 3.0 m/ s^2 for 4.0 s. find the distance covered by boat during this time.

Q.10: An artificial satellite is moving in a circular orbit of radius $7/22 \text{ km}$. Calculate its speed if it takes 2000 s to revolve around the earth.

Q.11: A car moves with a speed of 160 km/h for 30 minutes and then with a speed of 240 km/h for the next 30 minutes. Calculate the total distance(km) covered by the car in 60 minutes.

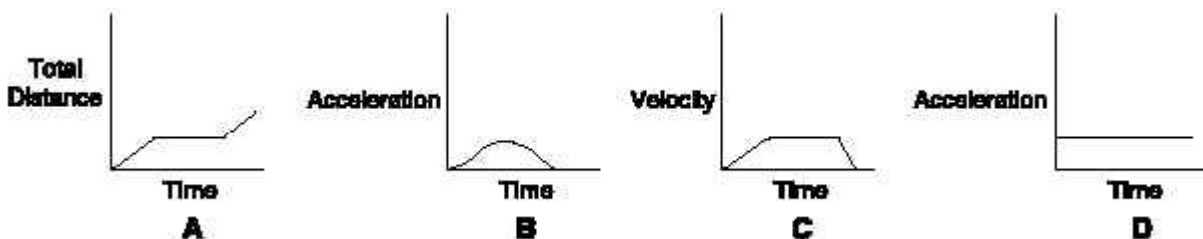
Q.12: An airplane accelerates down a runway at 3.20 m/s^2 for 32.8 s until is finally lifts off the ground. Determine the distance traveled before takeoff.

Q.13: A feather is dropped on the moon from a height of 0.835 meters. The acceleration of gravity on the moon is 1.67 m/s^2 . Determine the time for the feather to fall to the surface of the moon.

Q.14: A stone is dropped into a deep well and is heard to hit the water 3.41 s after being dropped. Determine the depth of the well. (hint: assume acceleration 9.8 m/ s^2)

Q.15: A driver starts her car and steps on the gas pedal. The car gradually accelerates to 50 km/hr. A few minutes later, the driver suddenly slams on the brakes to avoid hitting a box in the road. As the car comes to a stop, the driver's body appears to lurch forward in the seat until it is restrained by the seat-belt.

Use the following graphs to answer the next two questions.



1. Which graph best matches the motion of the car described in the paragraph above?

- a. A
- b. B
- c. C
- d. D

2. A student rides her bicycle from her home to the library. She stays there for a while and then goes to a friend's house. Which graph best matches this situation?

- a. A
- b. B
- c. C
- d. D

Answer:

1. *A*
2. *B*
3. *A*
4. *D*
5. *D*
6. *A*
7. *A*
8. 36 m
9. 24 m
10. 1m/s
11. 200 km
12. 1720 m
13. 1 s
14. 57 m
15. C,A

For any further query:

contact me through email- skdwivedi2009@gmail.com