



Dnyansagar Coaching Classes, A'nagar

First Term Exam

Std. - IX

Sub- Science-I

(Chap - 3, 10, 11, 12)

Time - 2 hrs

Max Marks - 40

- Q.1 A] Rewrite the statement by selecting the correct option. 2**
- The principle used for the motion of rocket is based on Newton's _____ law of motion.
 - In the SI system, _____ is the unit of force.
 - In the earth shrinks to half of its radius its mass remains same. The weight of an object on earth will change _____ times.
 - Retardation means _____ acceleration.
- B] Match the columns 2**
- | A | B |
|-------------------------------|-------------------|
| 1) Mass | a) m/s^2 |
| 2) Weight | b) kilogram |
| 3) Gravitational acceleration | c) $Nm^2 kg^{-2}$ |
| 4) Gravitational constant | d) Newton |
- C] Say whether the following statements are true or false- 2**
- The value of g at high altitude is more than that at lower altitude.
 - The earth moves around the sun with a uniform velocity.
 - Velocity and acceleration are always in the same direction.
 - Mass and weight are same.
- D] Find the odd man out 2**
- Force applied to sponge, force applied to a trolley, force applied to a balloon, force applied to spring.
 - Negative acceleration, positive acceleration, retardation, deceleration.
 - Motion of the moon, motion of vehicle along circular track, motion of vehicle along rectangular track, motion of electron inside the atom.
 - Flights of birds, motion of vehicles, motion of train, motion of the earth.
- Q.2 A] Give scientific reasons :- (Any -2) 4**
- When a body falls freely on the ground, it falls with uniform acceleration.
 - It is advised to tie any luggage kept on the roof of the bus with a rope.
 - It is easy to stop a tennis ball than a cricket ball moving with the same velocity
 - Distance and displacement are different concepts.
- B] Distinguish between - (Any -2) 4**
- Force and momentum
 - Mass and weight
 - Distance and displacement
 - Universal gravitational constant and gravitational acceleration of earth
- Q.3 A] Solve. (Any -2) 4**
- A person travels a distance of 72km in 4 hours. Calculate average speed in m/s.
 - An object of mass 16 kg moves with a n acceleration of $3m/s^2$. Calculate the force acting on it. If the same force is applied to another object of mass 24kg, what will be the acceleration?

P.T.O.

- iii) If the weight of a body on the surface of the moon is 100N, what is its mass?
- iv) An object moves 18 m in first 3 second and 22 m in the next 3 second while it travels 14m in the last 3 second. Calculate average speed.

B] Explain with proper examples - 'Motion is relative'. 4
OR

B] Explain the term 'gravity'. 4

Q.4 A] Give any two examples of each. (Any -2) 4

- i) Example of force in Lifts
- ii) Inertia
- iii) Metals
- iv) Liquids

B] Write note on - (Any - 2) 4

- i) Circular motion
- ii) Velocity
- iii) Gravitation
- iv) Free fall

Q.5 A] Answer in One sentence. (Any - 4) 4

- i) State Newton's first law.
- ii) What is Balance force?
- iii) Give law of conservation of momentum.
- iv) Why fruits falls of earth?
- v) Give value of 'g'.
- vi) Give unit of Velocity.

B] Explain the factors affecting the value of 'g' 4

OR

B] What are Isotopes its uses. 4
