

Physics - FSC Part 1 Physics Chapter 5 Short Questions Preparation

Q1. Define angular velocity, How its direction is determined?

Ans 1: The rate of change of angular displacement is called angular velocity. The direction of angular velocity is along the axis of rotation and can be determined by right hand rule:
"Grasp the axis of rotation in right hand with the fingers curling in the direction of rotation then the erect thumb will give the direction of angular velocity."

Q2. Define angular displacement and write its S.I unit.

Ans 1:

Q3. State the law of conservation of angular momentum.

Ans 1:

Q4. How would you determine the direction of angular momentum?

Ans 1: The direction of angular momentum can be determined by right hand rule:
"Grasp the axis of rotation in right hand with the fingers curling in the direction of rotation then the erect thumb will give the direction of angular momentum."

Q5. On what factors moment of inertia depends?

Ans 1: The moment of inertia is $I = mr^2$
So it depends upon the mass of the body and its distance from the axis of rotation.

Q6. An object orbiting around the earth is said to be a freely falling body. Why?

Ans 1: An object in orbit is said to be freely falling, because the trajectory of its fall has the same curvature as Earth's surface. In fact, the object is falling towards the center of earth but because of spherical shape of earth, it never reaches the surface of earth.

Q7. What are Artificial Satellites?

Ans 1: Artificial Satellites are the man-made objects that orbit around the Earth.

Q8. What is meant by angular momentum?

Ans 1:

Q9. What is meant by centripetal force? Write down its formula.

Ans 1:

Q10. Define centripetal force and centripetal acceleration.

Ans 1: The force needed to bend the normally straight path of the particle into a circular path is called the centripetal force. The instantaneous acceleration of an object traveling with uniform speed in a circle is directed towards the centre of the circle and is called centripetal acceleration.
