The City School

University Road Campus

MATRIC SECTION (10th)

PHYSICS

Chapter # 4

Motion And Forces

MULTIPLE CHOICE QUESTIONS (MCQ):

Chapter # 3

Kinematics Of Linear Motion

NUMERICALS

1. **The S.I. unit of mass is:**
   (a) kilogram (b) newton
   (c) gram (d) slug

2. **The quantity of motion contained in a body is called:**
   (a) force (b) weight
   (c) torque (d) momentum

3. **The S.I. unit of force is:**
   (a) kilogram (b) newton
   (c) watts (d) joule

4. **Mass can be measured by:**
   (a) thermometer (b) physical balance
   (c) ammeter (d) all of them

5. **Rolling friction is always less than:**
   (a) static friction (b) sliding friction
   (c) fluid friction (d) contact friction

6. **Sliding friction is greater because the area of contact is:**
   (a) smaller (b) greater
   (c) equal (d) none of them

7. **Newton's 2nd law of motion helps us in the measurement of:**
   (a) mass (b) weight
   (c) force (d) pressure

8. **The force acting along a 8trlng is called:**
   (a) power (b) mass
   (c) tension (d) energy

9. **The quantity of matter in a body is called its:**
   (a) mass (b) force
   (c) weight (d) power

10. **The product of mass and velocity is called:**

(a) acceleration (b) speed
(c) velocity (d) momentum

11. **The maximum force of friction which Just stops the body from moving is called:**

(a) rolling friction (b) sliding friction
(c) √ limiting friction (d) none of these

12. **If F = 4N, a = 2 ms^{-2} then m is:**

(a) 2 g (b) 8 kg
(c) 6kg (d) 4kg

13. **If m = 30,000 kg, v = 3.5 ms^{-1} then momentum will be:**

(a) 10,5000 Ns (b) 105 Ns
(c) 8571.42 Ns (d) 1000 Ns

14. **The law of conservation of momentum states that the momentum of an Isolated system is always remains:**

(a) greater (b) lesser
(c) constant (d) zero

15. **The resisting force between two surfaces before the motion starts is called:**

(a) static friction (b) kinetic friction
(c) rolling friction (d) sliding friction

16. **The friction during motion is called:**

(a) static friction (b) kinetic friction
(c) rolling friction (d) sliding friction

17. **The force with which the earth attracts a body towards its centre is called:**

(a) weight (b) mass
(c) tension (d) friction

18. **When an unbalanced force acts upon a body, it produces:**

(a) weight (b) momentum
(c) acceleration (d) friction

19. **It is that characteristic of a body due to which it resists against any change in its state:**

(a) momentum (b) force
(c) weight (d) inertia

NUMERICALS:

A motorcyclist covers 150 m in 10 sec. Find the speed of the motorcyclist.

The velocity of a motor car moving along a road increases from 10 m/s to 50 ms^{-1} in 8 s. Find its average acceleration.

A car is moving with uniform acceleration and attains the velocity of 72 kmh^{-1} in 5 min. Find acceleration of the car.

A bus is moving with a velocity of 60 kmh1.When breaks are applied it comes to rest after two seconds. Find the distance travelled by it, before coming to rest?

A ball is dropped from a tower. It reaches the ground in 10 seconds. Calculate the height of the tower and the velocity with which it hits the ground.

A person hears the echo of his own sound from a distant hill after 2 seconds. How four away is the person from the hill if the speed of sound is $330\ ms^{-1}$?

A stone is thrown vertically upwards with a velocity of $20\ ms^{-1}$. Find the maximum height reached by the stone and the total time of flight.

A ball is dropped from a tower. It reaches the ground in 10 seconds. Calculate the height of the tower and the velocity with which it hits the ground.