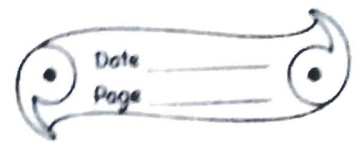


Motion



1. * A body is said to be at rest if it does not change its position with respect to a fixed point in its surrounding.

* A body is said to be in motion if it change its position with respect to its surrounding changes with time, the body is said to be in motion.

2. An object can be in motion relative to one set of objects. Thus, rest and motion are relative terms.

3. a) motion, at rest b) at rest, in motion

4. * Translatory motion

* Rotatory motion

* Random Motion

* Vibratory motion

* Periodic Motion

5. If an object, like a vehicle, moves in a straight line in such a way that every part of the object moves through the same distance in the same time then the motion is said to be translatory. Ex - Mango falling from a tree

6(i) Rectilinear Motion - If the motion of body is along a straight path the motion is said to be rectilinear motion. Ex - motion of arrow from a bow.

(ii) Curvilinear motion - If the motion of body is along a curve path the motion is said to be curvilinear motion. Ex - a car moving in a curve path

7. If the body about a fixed axis without changing the radius of its rotation is

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said to be rotatory motion Example - a spinning wheel

Q8. The motion of a body along a circular path is called circular motion. Ex - an artificial satellite orbiting the earth at constant height

Q9. In a rotatory motion, the axis of rotation passes from a point in the body itself. Where in a circular motion, the axis of revolution passes through a point outside the body.

Q10. The to and fro motion of a body from its mean position is called oscillatory motion. Ex - Motion of swing in the park.

Q11. When a part of the body remains fixed and rest part moves to and fro is called a ~~bits~~ vibratory motion.

Ex. Our chest expand and contracts

Q12) The motion which get repeated after regular interval of time is called periodic motion. Ex - Earth's rotation.

The motion which does not get repeated after regular interval of time is called non periodic motion ex - motion of tides

Q13) when an object in motion have no specific path and changes its motion suddenly. Ex a wish lantern

- Q14) rectilinear (f) rotatory
(b) rotatory (e) uniform
(c) oscillatory (g) rotatory
(d) non-periodic

- Q15) (a) the wheel of a moving car
(b) Carpenter using drill machine

Q16) periodic motion

(12) Rotatory motion

(1) mixed

(2) mixed

Q17) When a body covers equal distance in

equal interval of time are called uni-

form motion. Ex car moving at 20 km/h
in a straight line

When a body covers unequal distance

in equal interval of time in a straight

line is called non uniform motion

Ex - spinning wheel

Q18 Avg. speed = $\frac{\text{Total distance travelled}}{\text{Total time taken}}$

Q19. Weight of a body is the force with which earth attracts a body towards itself.
SI unit = N

Q20 1 kgf = 10 N

Q21 Mass	Weight
* SI unit is kg	SI unit is N
* It is the quantity of matter	* force with which the earth attracts
* It is measured in beam balance	It is measured in spring balance

Q22 ~~Weight~~ Mass

Q23 weight