



EFFORT CLASSES

Dare to Dream !.... Dreams come true !

**Shop no. 29 & 30, Twin Tower, Sector 20, Behind Jalvayu Vihar, Kharghar, Navi Mumbai-410210.
Contact: 022-79604732/9167884425**

Q.P code-199/CSMST1

IX CBSE

Date- 06/02/20

Time – 1 hr

SCIENCE

Marks-20

Topic – Gravitation

Multiple choice questions

(3)

1 Gravitational force between two objects is 10 N. If masses of both objects are doubled without changing distance between them then the gravitational force would become

- (a) 2.5 N (b) 20 N
(c) 40 N (d) 10 N.

2 the value of of acceleration due to gravity

- (a) is same on equator and poles.
(b) Is least on poles.
(c) Is least on equator
(d) Increases from pole to equator.

3 Three spheres have radii 1cm, 2 cm and 3 cm respectively. Which sphere exerts maximum pressure on earth?

- (a) first (b) second
(c) third (d) all equal

Very short answer

(3)

4 Does the force of gravitation exist at all the places of the universe?

5 The gravitational force between two objects is f how will the force change when the distance between them is reduced to $\frac{1}{4}$ th?

6 Weight of an object at a given place can be a measure of its mass. Comment.

Short answer

(9)

7 A sphere of mass 40 kg is attracted by a second sphere of mass 15 kg when their centres are 320 apart with a force of 0.1 milligram weight calculate the value of gravitational constant [Ans. $1.7 \times 10^{-8} \text{N-m}^2/\text{kg}^2$]

8 Find the ratio of weights of a body on the earth and Jupiter, given g on Jupiter is 2.5 Times that on the earth.

9 A man is asked to run with a bag containing 20 kg still block. Will it be easier for him to run with 20 kg cotton replacing the block. Explain with reason.

Long answer

(5)

10 (i) How does a Boat float in water?

(ii) State two factors on which magnitude of buoyant force acting on a body immersed in a fluid depends.

(iii) A block of wood can float while similar sized block of concrete can be used as an anchor. Why?