Chapter 1 Gravitation

Q.1 Use the correct option from below. (marks 1)

1. If the distance between two particles of matter is r then the gravitational force between those particles changes in ……proportion.

   a) 1/r (b) r (c) r^2 (d) $1/r^2$

2. A person having weight 60 N on Earth will weigh approximately……..on Earth.

   (a) 360 N (b) 36 N (c) 6 N (d) 10N

Q. 2 . Find the odd word. write the reason for it (marks 1)

1. Newlands , Moseley , Doberiener, Mendeleev
2. Fluorine , Sulfur , Bromine , Iodine
3. Sodium , Aluminum , chlorine , Carbon
4. Nitrogen , Neon , Argon, Helium

Q. 3 . Write true or false . (marks 1)

1. The value of gravitational acceleration is zero at the center of Earth
2. Weight of objects is less on the poles.
3. Mass is a scalar quantity .
4. Weight is a scalar quantity.
5. Value of g is maximum on the equator.
6. The Velocity and the escape velocity of an object depends on its mass.
7. Mass is a qualitative measure of the inertia of an object.

Q. 4. Differentiate between . **(marks 2)**

1. weight and mass
2. gravitational constant and acceleration due to gravity

Q. 5 Write definition **(marks 2)**

1. What is centripetal force?
2. write Keppler's three laws **(marks 3)**

Q. 6 . Write short note **(marks 2)**

1. Explain the concept of gravitational force

(or)

Explain the gravitation of Earth .

2. Explain escape velocity

Q. 7. Questions based on table **(marks 3)**

I	II	III
1. Mass 2. Weight 3. Acceleration due to gravity 4. Gravitational constant	m /s2 kg N.m2 /kg2 N	Zero at the centre of Earth Measure of inertia Same over universe Depends on height