

Name: _____						
Subject: Physics		Class: 9 th	Time: 80 minutes	Total Marks:	40	
Chapter No.2		MJDEXPERT.COM			Obtained marks	

Note: Please attempt any 10 short questions from Question 2. Also, attempt both parts (a and b) of Question 3. Cutting and removal of any content is strictly prohibited.

Q.1: Tick (✓) the correct answer.

- The motion of a steering wheel is an example of:
A) Random motion B) Rotatory motion C) Vibratory motion D) Linear motion
- The study of the motion of objects is covered under:
A) Kinematics B) Light C) Sound D) Plasma
- 72 km/h is equivalent to:
A) 20 m/s B) 10 m/s C) 36 m/s D) 200 m/s
- The motion of insects is classified as:
A) Random motion B) Circulatory motion C) Rotatory motion D) Vibratory motion
- Dividing the displacement of a moving body by the time taken gives us:
A) Acceleration B) Speed C) Velocity D) Deceleration
- The mass of a body on the Earth's surface is 16 kg. Its weight will be:
A) 1600 N B) 160 N C) 160 N D) 0.16 N
- How many types of motion are there?
A) 2 B) 3 C) 4 D) 5
- The acceleration of a body falling freely under gravity is approximately:
A) 10 m/s² B) 10 m/s C) 10 m²/s D) 10 m⁻¹/s²
- The area under a speed-time graph represents:
A) Distance B) Speed C) Time D) Velocity
- Which of the following is a vector quantity?
A) Speed B) Displacement C) Distance D) Power

Q.2: Write short answers to any ten (10) of the following questions:

- Write the equations of motion for uniformly accelerated motion.
- Compare translatory motion with linear motion.
- What is a LIDAR gun and how is it used?
- Draw a representation of a force of 80 N acting towards the north-east.
- Convert the following quantities into scientific notation:
 - 5000 grams
 - 0.00045 meters
- Define scalar quantities and vector quantities.
- Explain gravitational acceleration and provide its equation.
- How is a vector quantity visually represented?
- Differentiate between rest and motion.
- Can an object moving at a constant speed still have acceleration?
- Define acceleration and provide its formula.
- Sketch a distance-time graph for an object moving at a constant speed.

Q.3: Answer the following questions:

- Derive the first equation of motion using a graphical representation.
- Explain the concepts of uniform velocity and uniform acceleration in detail.