

**Loyola**

# EC SCIENCE



TERM - I  
TERM - II  
TERM - III

**6**

**BASED ON CCE**

This special guide is prepared  
on the basis of New syllabus

**FREE**  
**Formative Assessment Fa (b)**

**Loyola**

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## நூலாக்கம்

லொயோலா பப்ளிகேஷன்

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## 6<sup>th</sup> EC SCIENCE - முதன்மை புத்தகம்

மாணவ / மாணவிகளின் உள, மனம் நலன்கருதி தயாரிக்கப்பட்ட சிறப்பு நூல்

### I. சிறப்புகள்

1. விடைகள் மிக எளிமையாகவும் மாணவ / மாணவிகள் எளிதில் புரியும் வண்ணம் 10, 11 மற்றும் 12ம் வகுப்பு அரசுத்தேர்வில் விடைத்தாள் மதிப்பீடு செய்வது போல் [Key] அடிப்படையில் தயாரிக்கப்பட்டுள்ளது.
2. 2 மற்றும் 5 மதிப்பெண் விடைகள் மாணவ / மாணவிகள் புரிந்து கொள்வதற்காக சற்று விரிவாக கொடுக்கப்பட்டுள்ளது.
3. தேவைக்கேற்ப கூடுதல் வினாவிடைகள் கொடுக்கப்பட்டுள்ளது.
4. மூன்று பருவமாக பிரிக்கப்பட்டுள்ளது.
5. பாடத்திற்கு பின்னால் உள்ள செயல்பாடுகளுக்கான [Fa(a)] விடை கொடுக்கப்பட்டுள்ளது.
6. 6ம் வகுப்பு முதல் 9ம் வகுப்பு வரையுள்ள அனைத்து நூல்களும் 10, 11 மற்றும் 12ம் வகுப்பை நோக்கியே எழுதப்பட்டுள்ளது.

### II. உருவாக்க மதிப்பீட்டு - பதிவேடு [Fa(b)]

1. வளரறி மதிப்பீட்டிற்காக ஒவ்வொரு பருவத்திற்கும் நான்கு வினாத்தாள் இப்பதிவேட்டில் இடம் பெற்றுள்ளது.

**குறிப்பு :** Loyola EC புத்தகங்களை 10,11 மற்றும் 12ம் வகுப்புகளில் மாணவ / மாணவிகள் வாங்கிப் பயின்றால், அரசுத்தேர்வில் அதிக மதிப்பெண்கள் பெற்று உச்சத்தைத் தொடலாம் என்பதை மகிழ்ச்சியுடன் தெரிவித்துக்கொள்கிறோம்.

### வாழ்த்துக்கள்

அன்புடன்

LOYOLA PUBLICATIONS

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# TERM - I

UNIT

1

## MEASUREMENTS

### PART I - BOOK BACK QUESTIONS

#### I. Choose the correct answer:

- The height of a tree can be measured by  
a) metre scale   b) metre rod   c) plastic ruler   d) measuring tape.  
Ans: d) measuring tape.
- Conversion of 7 m into cm gives \_\_\_\_\_  
a) 70 cm   b) 7 cm   c) 700 cm   d) 7000 cm   Ans: c) 700 cm
- Quantity that can be measured is called \_\_\_\_  
a) physical quantity   b) measurement   c) unit   d) motion.  
Ans: b) measurement
- Choose the correct one  
a) km > mm > cm > m   b) km > mm > m > cm  
c) km > m > cm > mm   d) km > cm > m > mm   Ans: c) km > m > cm > mm
- While measuring the length of an object using a ruler, the position of your eye should be  
a) Left side of the point.  
b) Vertically above the point where the measurement is to be taken.  
c) Right side of the point.  
d) any where according to one's convenience.  
Ans. b) Vertically above the point where the measurement is to be taken.

#### II. Fill in the blanks:

- SI unit of length is \_\_\_\_\_.      Ans: metre
- 500 gm = \_\_\_\_\_ kilogram.      Ans: 0.5
- The distance between Delhi and Chennai can be measured in \_\_\_\_\_.      Ans: Kilometre
- 1 m = \_\_\_\_\_ cm.      Ans: 100
- 5 km = \_\_\_\_\_ m.      Ans: 5000

#### III. State True or false. If false, correct the statement

- We can say that mass of an object is 126kg      Ans: True
- Length of one's chest can be measured using metre scale.      Ans: False  
Length of one's chest can be measured using measuring tape.
- Ten millimetre makes one centimetre.      Ans: True



4. A hand span is a reliable measure of length. **Ans: False**  
**metre** is a reliable measure of length.
5. The SI system of units is accepted everywhere in the world. **Ans: True**

#### IV. Complete the Analogy

1. Sugar : Beam Balance :: Lime Juice : \_\_\_\_\_? **Ans: Measuring Jar**
2. Height of a person : cm :: Length of your sharpened pencil lead : \_\_\_? **Ans: mm**
3. Milk : Volume :: vegetables : \_\_\_\_\_? **Ans: Weight (Kilogram)**

#### V. Match the following

	Column A		Column B		Answer
1	Length of the fore arm	a	metre	e	Cubit
2	SI unit of length	b	Second	a	metre
3	Nano	c	$10^3$	d	$10^{-9}$
4	SI unit of time	d	$10^{-9}$	b	Second
5	Kilo	e	Cubit	c	$10^3$

#### VI. Arrange the following in the increasing order of unit

1 Metre, 1 Centimetre, 1 Kilometre, and 1 Millimetre.

**Ans.** 1 Millimetre, 1 Centimetre, 1 Metre, 1 Kilometre.

#### VII. Answer in a word or two.

- |   |                              |
|---|------------------------------|
| 1. What is the full form of SI system?                                | International system of unit |
| 2. Name any one instrument used for measuring mass.                   | Beam Balance                 |
| 3. Find the odd one out: Kilogram, millimetre, centimetre, nanometre. | Kilogram                     |
| 4. What is the SI unit of mass?                                       | Kilogram                     |
| 5. What are the two parts present in a measurement.                   | i) a number, ii) unit        |

#### VIII. Find the answer for the following questions within the grid

- |  | Answer     |
|--|------------|
| 1. $10^{-3}$ is one _____.   | millimetre |
| 2. SI unit of time is _____.   | Second     |
| 3. Cross view of reading a measurement leads to _____.   | Error      |
| 4. _____ is the one what a clock reads.  | Time       |
| 5. _____ is the amount of substance present in an object.  | mass       |
| 6. _____ can be taken to get the final reading of the recordings of different students for a single measurement. | Average    |
| 7. _____ is a fundamental quantity.  | Length     |



8. \_\_\_\_\_ shows the distance covered by an automobile.  
 9. A tailor uses \_\_\_\_\_ to take measurements to stitch the cloth.  
 10. Liquids are measured with this physical quantity \_\_\_\_\_.

Odometer  
 tape  
 litres

A		P		L								R		K	
C		O		E								O		S	
M		K		N								R		I	
P		R		G								R		T	
R	H	E	S	T	E	D	L	L	I	T	R	E	D	A	
L		T		H						D		H		P	
O		E		O					N			K		E	
A		M	A	S	S				O			R		V	
V		I		E					C			T		O	
E		L		K			E					S		S	
R		L		I			S					K		H	
A		I		T								V		P	
G		M		X					M			N		U	
E		Z		D			E	S	K	P	G	I	W	M	F
Z	T	D		H				O	D	O	M	E	T	E	R

### IX. Answer briefly:

1. **Define measurement.**

The comparison of unknown quantities with some known quantities is known as measurement.

2. **Define mass?**

Mass is the measure of the amount of matter in an object.

3. **The distance between two places is 43.65 km. convert it into metre and cm.**

(a) **Convert km into metre**

$$1 \text{ km} = 1000 \text{ m}$$

$$\therefore 43.65 \text{ km} = 43.65 \times 1000 = 43650.00 = 43650 \\ = 43650 \text{ m}$$

(b) **Convert km into cm.**

$$1 \text{ km} = 1000 \text{ m}$$

$$1 \text{ m} = 100 \text{ cm}$$

$$\begin{aligned}
 1 \text{ km} &= 1000 \times 100 \text{ cm} \\
 1 \text{ km} &= 100000 \text{ cm} \\
 \therefore 43.65 \text{ km} &= 43.65 \times 100000 = 4365000.00 \\
 &= 4365000 \text{ cm}
 \end{aligned}$$

**4. What are the rules to be followed to make accurate measurement with scale?**

- (i) Take care to write the correct submultiple.
- (ii) Always keep the object in parallel to the scale.
- (iii) Start the measurement from '0' of the scale.

**X. Solve the following:**

**1. The distance between your school and your house is 2250 m. Express this distance in kilometre.**

Distance between school and house is 2250 m.

$$1000\text{m} = 1\text{km}$$

$$\therefore 2250 \text{ m} = 2250 \div 1000 = 2.25 \text{ km}$$

**2. While measuring the length of a sharpened pencil, reading of the scale at one end is 2.0 cm and at the other end is 12.1 cm. What is the length of the pencil?**

Sharpened pencil Reading at one end = 2.0 cm

Sharpened pencil Reading at the other end = 12.1 cm

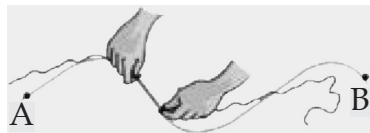
$$\begin{aligned}
 \text{Length of the pencil} &= \text{Difference between two ends.} \\
 &= 12.1 \text{ cm} - 2.0 \text{ cm} \\
 &= 10.1 \text{ cm}
 \end{aligned}$$

**XI. Answer in detail:**

**1. Explain two methods that you can use to measure the length of a curved line.**

**Method: 1 - Using a string**

- Take a string and place it along the curved line.
- Mark the points where the curved line begins and ends on the string.
- Stretch the string along the length of a meter scale and measure the distance between the two markings of the string.
- This will give you the length of a curved line.



**Method: 2 - Using a divider**

- Take a divider separate the legs of the divider by 0.5 cm (or) 1 cm using a ruler.
- Place it on the curved line starting from one end.
- Mark the position of the other end.
- Move it along the line again and again cutting the line into number and segments of equal lengths.



- The remaining parts of the line can be measured using a scale.
- The Length of the line = (number of segments x length of each segment) + Length of the left over part.

2. Fill in the following chart.

Property	Definition	Basic unit	Instrument used for Measuring.
Length	The distance between one end and the other desired end.	Metre (m)	Metre scale measuring tape.
Mass	Mass is the measure of the amount of matter in an object.	Kilogram (kg)	Beam balance, Electronic balance.
Volume	The amount of space that an object occupies (or) that is enclosed with in a container.	Cubic metre (m <sup>3</sup> ) Litres	Graduated cylinder, beaker, pipettes, and burette.
Time	Interval between two events.	seconds	Sand clock, electronic clock, stop watches.

### PART II - ADDITIONAL QUESTIONS

#### I. Choose the best option:

1. What is 7 m in mm?  
a) 0.7 mm      b) 700 mm      c) 7000 mm      d) 70 mm      **Ans. c) 7000 mm**
2. What is the unit of electric current in SI system?  
a) Kelvin      b) Ampere      c) seconds      d) Volt.      **Ans. b) Ampere**
3. What is the unit of length?  
a) metre      b) litre      c) second      d) kilogram.      **Ans. a) metre**
4. These are the measurements used in measuring the volume of liquid.  
a) cylinder      b) pipettes      c) burettes      d) All.      **Ans. d) All**
5. These are the instruments used in measuring the volume of the objects with irregular shape.  
a) Balance      b) Electronic balance  
c) Displacement of water method      d) sand clock.  
**Ans. c) Displacement of water method.**

**II. True or false:**

- The comparison of known quantity with the unknown quantity is the mass.
- The area can be calculated by using the two lengths and width.
- Using electronic balance weight can be measured accurately.

Ans. 1. False, 2. True, 3. False.

**III. Fill in the Blanks.****Answer**

- |  |             |
|--|-------------|
| 1. 78.75 cm = ___m ___ cm  | 78 m, 75 cm |
| 2. 1195 m = _____ km _____ m   | 1 km, 195 m |
| 3. 15 cm 10 mm = _____ mm  | 160 mm      |
| 4. 45 km 33 m = _____ m.   | 45033 m     |
| 5. The metric system of unit is developed in the year _____ by French. | 1790        |

**IV. Match**

1.	Column A		Column B		Answers
	1 Length	a	Litre	d	metre.
	2 Mass	b	Seconds	c	Kilogram
	3 Time	c	Kilogram	b	Seconds
	4 Volume of liquid	d	metre.	a	Litre

2.	Column A		Column B		Answers
	1 1000 gm	a	1 kilo meter	d	1 kilogram
	2 1000 milligram	b	1 ton	c	1 gram
	3 1000 kilogram	c	1 gram	b	1 ton
	4 1000 metre	d	1 kilogram	a	1 kilo meter

**V. Write the following unit in ascending order.**

1. Ton - gram - kilogram - Metric ton

Ans. Gram - kilogram - ton - metric ton.

**VI. Very short answer. (2 marks.)**

1. What is international system of units or SI units?

For the sake of uniformity all over the world we have adopted a common set of units to express measurements that are called as International system of units or SI units.



## 2. Differentiate mass from weight:

Mass	Weight
Mass is the measure of the amount of matter in an object. Unit – kilogram	Weight is the gravitational pull experienced by the mass. Unit – Newton.

## 3. What are the unit of measurements of very small length?

(i) Millimetre (ii) centimetre.

## 4. What are the basic quantity of physics?

(i) Length (ii) Mass (iii) Time.

## 5. What are the clock used by ancient people to measure day time?

(i) sand clock (ii) sun clock.

## 6. What are the clock used to measure the time accurately ?

(i) Electronic clock (ii) Stop clock

## 7. What is odometer?

It is a device used for indicating distance travelled by an automobile.

### VII. Give detailed answers: (5 marks)

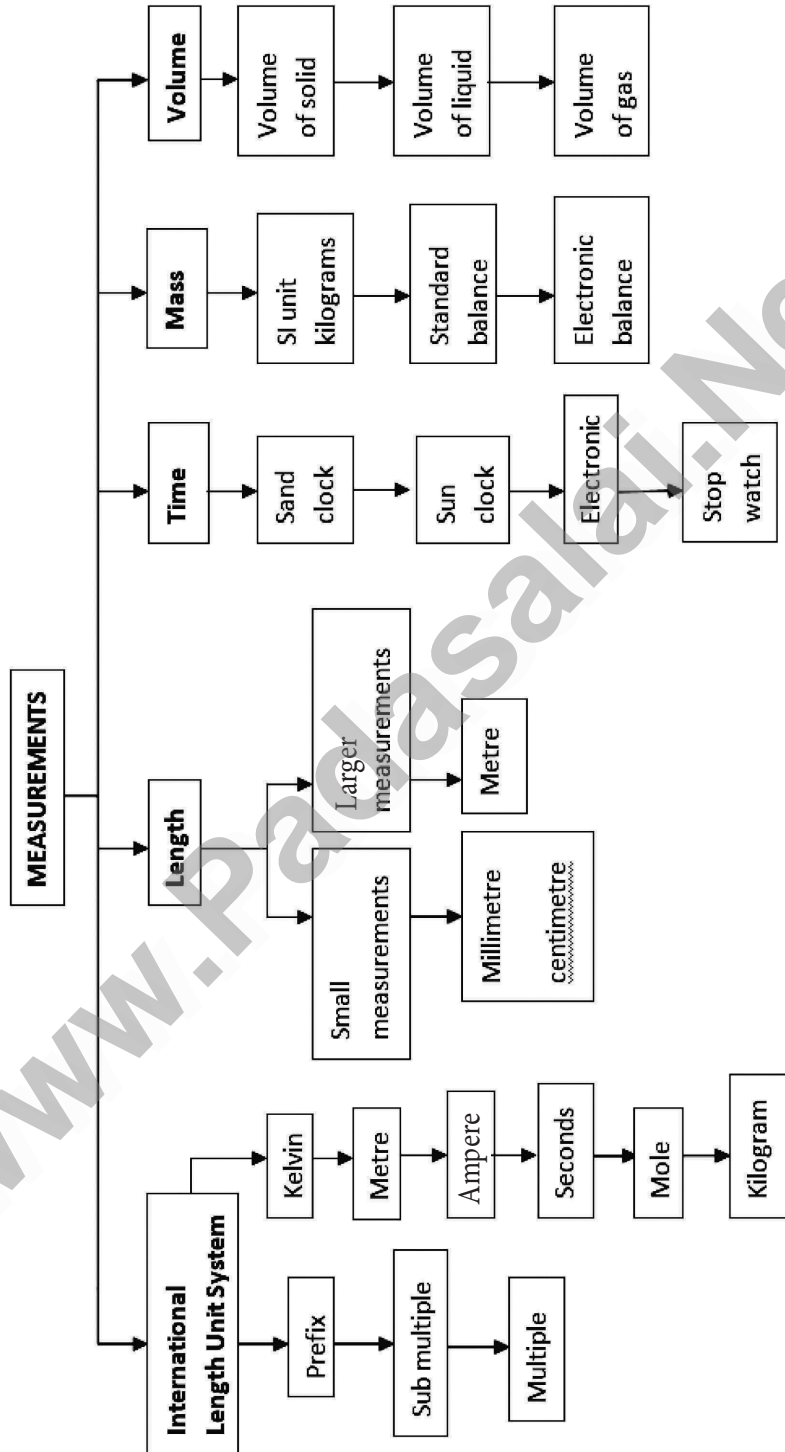
## 1. What are the features that we must give importance in measuring ?

- The object should match with the '0' of the scale.
- The object should be in parallel with the scale.
- Always start from '0'.
- Measure the bigger division (m) first and then measure smaller (mm) division.
- When we measure the bigger division it should be measured initially and then mark a point and then measure the smaller division (eg) if the length of the pencil is 6 cm 2 mm and then it is 6.2 cm.

## 2. How will you measure the weight of the object with irregular shape?

- Fill a graduated measuring cylinder with 50 ml of water.
- Tie the stone with a piece of fine thread and immerse the stone completely into water.
- As the stone is immersed the water level will increase. And show 75 ml of rise. The stone displaces water and hence the rise. The amount of water displaced will be the volume of the stone.

Mind Map



**UNIT  
2**
**FORCE AND MOTION**
**PART I - BOOK BACK QUESTIONS**
**I. Choose the correct answer:**

- Unit of speed is  
a. m                      b. s                      c. kg                      d. m/s  
**Ans: d. m/s**
- Which among the following is an Oscillatory motion?  
a. Rotation of the earth about its axis  
b. Revolution of the moon about the earth  
c. To and fro movement of a vibrating string  
d. All of these.  
**Ans: c. To and fro movement of a vibrating string**
- The correct relation among the following is  
a. Speed = Distance x Time                      b. Speed = Distance / Time.  
c. Speed = Time / Distance                      d. Speed = 1 / (Distance x Time)  
**Ans: b. Speed = Distance / Time**
- Gita travels with her father in a bike to her uncle's house which is 40 km away from her home. She takes 40 minutes to reach there.  
**Statement 1:** She travels at a speed of 1km / minute  
**Statement 2:** She travels at a speed of 1km / hour  
a. Statement 1 alone is correct.  
b. Statement 2 alone is correct  
c. Both statements are correct.  
d. Neither statement 1 nor statement 2 is correct. **Ans: a. Statement 1 alone is correct.**

**II. Fill in the blanks**

- A bike moving on a straight road is an example for \_\_\_ motion. **Ans: Linear**
- Gravitational force is a \_\_\_\_\_ force. **Ans: non contact**
- Motion of a potter's wheel is an example for \_\_\_\_\_ motion. **Ans: rotatory**
- When an object covers equal distances in equal interval of time, it is said to be in \_\_\_\_\_ motion. **Ans: Uniform**

**III. State True or False. – if false, Correct the Statements**

- To and fro motion is called oscillatory motion. **Ans: True**
- Vibratory motion and rotatory motion are periodic motions. **Ans: False**  
Vibratory motion and **Oscillatory motion** are periodic motions.

3. Vehicles moving with varying speeds are said to be in non uniform motion.

Ans: False






Vehicles moving with varying speeds are said to be in **non uniform motions**.

4. Robots will replace human in future.

Ans: False,

Robots **will not replace** human in future.

**IV. Match the following:**

	A		B		Answer
1		a	Circular motion	c	Linear motion
2		b	Oscillatory motion	d	Rotatory motion
3		c	Linear motion	b	Oscillatory motion
4		d	Rotatory motion	a	Circular motion
5		e	Linear and rotatory motion	e	Linear and rotatory motion

**V. Given below is the distance – travelled by an elephant across a forest with uniform speed. Complete the data of the table given below with the idea of uniform speed.**

Distance (m)	0	4		12		20
Time (s)	0	2	4		8	10

**Ans:**

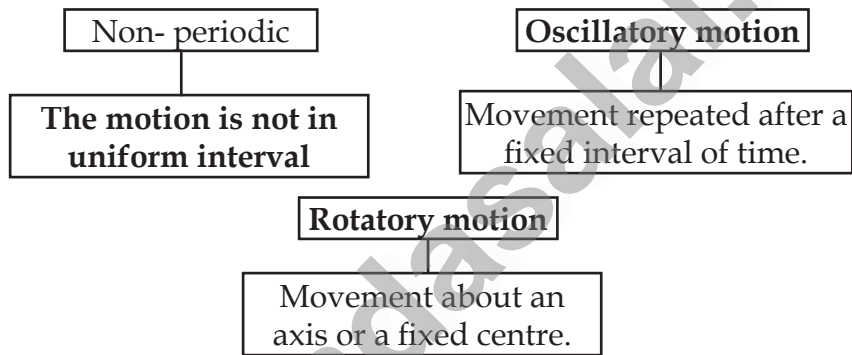
Distance (m)	0	4	8	12	16	20
Time (s)	0	2	4	6	8	10

- (i) Distance/Time =  $\frac{4}{2} \times 4 = \frac{16}{2} = 8$
- (ii) Distance/Time =  $\frac{4}{2} \times 8 = \frac{32}{2} = 16$
- (iii) Time/Distance =  $\frac{10}{20} \times 12 = \frac{12}{2} = 6$

### VI. Complete the Analogy:

- Kicking a ball: contact force :: Falling of leaf : non contact forces.
- Distance : metre :: Speed : m/s
- circulatory motion : a spinning top :: oscillatory motion : Pendulum.

### VII. Complete the web chart.



### VIII. Answer in a word or two

- The force which acts on an object without physical contact non contact forces.
- A change in the position of an object with time. Motion.
- The motion which repeats itself after a fixed interval of time. Oscillatory motion.
- The motion of an object which covers equal distances in equal Intervals of time Uniform motion.
- A machine capable of carrying out a complex series of actions automatically. Robots.

### IX. Answer briefly

- Define force:**  
Force is a push or pull by an animate or inanimate agency.
- Name different types of motion based on the path .**
  - Linear motion;
  - Curvilinear;
  - Circular motion;
  - Rotatory motion;
  - Oscillatory motion
  - Irregular motion.

3. If you are sitting in a moving car, will you be at rest or motion with respect your friend sitting next to you?

I will be at rest with respect to my friend sitting to me in a moving car.

4. Rotation of the earth is a periodic motion. Justify

Rotation of the earth is a periodic motion because it takes equal interval of time for all rotations.

5. Differentiate between rotational and curvilinear motion

	Rotational motion	Curvilinear motion
1	The movement of a body about its own axis	Movement of a body along curved path
2	Eg. Rotating tape	Eg. Throwing a ball

### X. Answer in detail:

1. What is motion ? classify different types of motion with examples.

Motion is a change in position of an object with respect to time.

#### Types of motion based on path:

- Linear motion:** moving in a straight line. Ex. a person walking on a straight path.
- Curvilinear motion:** moving ahead by changing direction. Ex. throwing a ball.
- Circular motion:** moving in a circle path. Ex. Swirling store tied to the rope.
- Rotatory motion:** The movement of a body about its own axis. Ex. Revolution of earth around sun.
- Oscillatory motion:** Coming back to the same position after a fixed time interval. Ex. pendulum.
- Zig zag (irregular):** The motion of a body in different direction. Ex. the motion of a bee.

#### Motion based on duration:

**Periodic motion :** motion repeated in equal interval of time. Ex. Revolution of the moon around the earth.

**Non periodic motion:** motion is not repeated in equal interval Ex. Sabin swing.

#### Motion based on speed :

**Uniform motion :** The object covers uniform distance in uniform intervals. Ex. Hour hand of a clock

**Non- uniform motion :** if an object covers different distances in different interval of times. Ex. Motion of vehicle.





**XI. Problems**

1. A vehicle covers a distance of 400 km in 5 hour. calculate its speed.

$$\begin{aligned} \text{speed (s)} &= \frac{\text{distance (d)}}{\text{time (t)}} \\ &= \frac{400}{5} = 80 \text{ km per hour.} \end{aligned}$$

**XII. Give examples**

Linear motion	-	A man walking in a straight road
Curvilinear motion	-	motion of paper Aeroplane
Self rotatory motion	-	Motion of the wheel in a cart
Circular motion	-	Motion of moon a round earth.
Oscillatory motion	-	Motion of pendulum
Irregular motion	-	People walking in a crowded street.

**PART II - ADDITIONAL QUESTIONS****I. Choose the best option:**

1. How earth revolves ?  
 a) From west to east                      b) east to west  
 c) From north to south                  d) south to west.                      **Ans. a) From west to east**
- 
2. What is the path of the housefly buzzing around the room?  
 a) Periodic motion                      b) Non- Periodic motion  
 c) circular motion                      d) None of the above  
**Ans. b) Non- Periodic motion**
- 
3. What is the unit of average speed in SI system?  
 a) metre / second                      b) kilometre/ seconds  
 c) kilometre/ time                      d) Metre/ Time.                      **Ans. a) metre / second**
- 
4. The cheetah the fastest animal among terrestrial animals run with the average speed of \_\_\_\_\_  
 a) 100 km /hr                      b) 200 km/hr  
 c) 112 km/hr                      d) 10 km /hr.                      **Ans: c) 112 km/hr**
- 
5. The motion of moon which revolves around the earth is \_\_\_\_\_  
 a) Oscillatory motion                      b) Periodic motion  
 c) curvilinear                      d) b and c                      **Ans. b) Periodic motion**

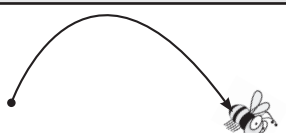
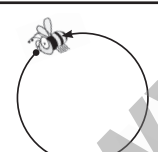

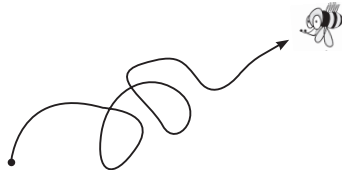
**II. Correct Answer: If it is wrong give the correct answer.**

- Change of position of an object with respect to time is motion      **Ans: correct.**
- Swirling stone tied to the rope is an example of **rotatory motion.**  
**Ans: wrong.** Swirling stone tied to the rope is an example of **circular motion.**
- The children flying in a swing is a periodic motion.      **Ans: correct.**
- All the oscillatory movement are periodic motions.      **Ans: correct.**
- The SI unit of speed is **kilometre**      **Ans: wrong,** The SI unit of speed is **metre.**

**III. Fill up the blanks :**

- People walking in a crowded street is \_\_\_\_\_ type of motion.      **Ans: irregular**
- Object moves not in a constant speed then the motion is \_\_\_\_\_  
**Ans: on- uniform motion**
- If Priya in her cycle travels 40 km in 2 hours then what is her average speed ?  
**Ans: 20 km/hr**
- Motion are of \_\_\_\_\_ types.      **Ans: four**
- The movement of a body about its own axis is \_\_\_\_\_      **Ans: Rotatory motion**

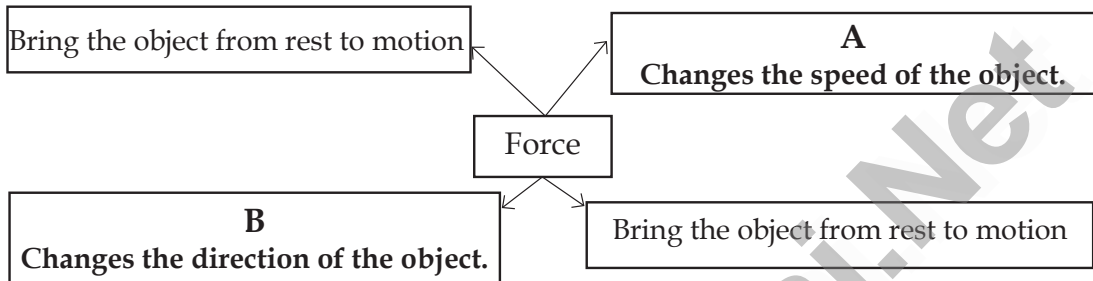
**IV. Match :**

	<b>A</b>		<b>B</b>		<b>Answers</b>
1		a	Oscillatory motion	b	Curvilinear motion
2		b	Curvilinear motion	d	Circular motion
3		c	Non- periodic motion	a	Oscillatory motion
4		d	Circular motion	c	Non- periodic motion



**V. Fill up the blanks in accordance with their relation:**

- The Motion of train – uniform motion. Motion of vehicles \_\_\_\_\_  
Ans. non – uniform motion.
- Periodic motion – The motion of moon which revolves around the earth.  
Oscillatory motion – \_\_\_\_\_.  
Ans : Motion of simple pendulum.

**VI. Fill up the missing statement.****VII. Fill up the blanks with the help of examples:**

- Motion of the needle of a clock.
  - Motion of an athlete of 100 m race
  - Motion of flag wagging
  - Motion of a car which goes in a circular path.
  - The motion of a needle in a sewing machine.
- Ans: 1. Oscillatory motion.    2. Linear motion.    3. Non- periodic motion  
4. circular motion    5. periodic motion or uniform motion.

**VIII. Two Mark Questions: Short answers:**

- |  |   |
|--|---|
| 1. <b>What is meant by the State of Rest?</b><br>When there is no change of position of an object with respect to time and if it remains stationary it is called rest. | 2. <b>What are the types of Force?</b><br>(i) Contact Force;<br>(ii) Non-Contact Force  |
| 3. <b>What is a contact force?</b><br>When the force is in contact with the object then it is known as contact force.  | 4. <b>What is average speed of the object?</b><br>The distance travelled by an object in unit time is called average speed of the object. |
5. **A bus moves with a speed of 40km and crosses 200km and then how many hours has that bus taken to travel?**

$$\text{Time (t)} = \frac{\text{Distance}}{\text{Average Speed}}$$

$$\text{Time (t)} = \frac{200 \text{ km}}{40 \text{ km/h}} = 5 \text{ hrs}$$

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**IX. Give Detailed Answers:**


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**1. What is a force? What are its types?**

**Forces:** Forces are push or pull by an animate or inanimate agency.

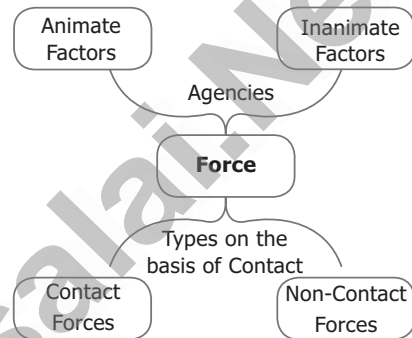
**Types of Forces:** (i) Contact forces; (ii) Non – Contact forces.

**Contact Force:** The force that is executed by touching the body is a contact force .  
Eg. Kicking the foot ball

**Non-Contact Force:** The force is applied. Without touching the object then it is called as non contact force.

Forces can

- (i) Change the states of body from rest to motion or motion to rest.
- (ii) Either change the speed or direction or both of the body.
- (iii) Change the shape of the body.



MIND MAP

