

# **FUSCO'S SCHOOL (ICSE)**

## Indiranagar , Bangalore ANNUAL EXAMINATION 2016-2017 Subject: PHYSICS

#### <u>Class :VII</u> I. FILL IN THE BLANKS

Marks:80

(10)

1. The SI unit of displacement is ..... (metre / centimeter )

2. ..... (Scalar / Vector) quantities require both magnitude and direction for their complete description.

3. Distance traveled by an object is always ..... ( positive / negative )

4. Average speed is calculated when a body travels with ..... (uniform / variable ) speed.

5. The SI unit of ..... (velocity / acceleration) is  $m/s^2$ 

6. Velocity is a ..... ( scalar / vector ) quantity.

7. A mango falling from a tree is an example of ..... (rectilinear / rotatory) motion.

8. ..... ( Concave / Convex ) mirror always forms virtual image.

9. ..... ( Concave / Convex ) mirror is used as a rear view mirror.

10. When the moon comes in between the earth and the sun,  $\dots$  (solar / lunar ) eclipse is formed.

## II. A) MATCH THE FOLLOWING

1. Speed of light	-	a. More than 20,000 Hz
2. Reflected Sound	-	b. 340 m/s
3. Speed of sound	-	c. sound absorbing material
4. Curtains	-	d. 3 x 10 <sup>8</sup> m/s
5. Ultrasonics	-	e. echo

## **B) NAME THE FOLLOWING**

- 1. The characteristic of sound that depends on its frequency.
- 2. A collection of tones.
- 3. Sound of frequency less than 20 Hz.
- 4. A scale to measure loudness.
- 5. Vibrations that are irregular and non-systematic.

## **III . DEFINE THE FOLLOWING**

- 1. Reflection
- 2. Lateral inversion
- 3. Angle of incidence
- 4. Principal of focus
- 5. Principal axis
- 6. Center of curvature
- 7. Sound
- 8. Regular reflection

(10)

(5)

(5)

9. Opaque medium

10. Thermal expansion

IV. DIFFERENTIATE BETWEEN THE FOLLOWING	(10)
1. Pitch and loudness	
2. Heat and temperature	
3. Conduction and convection	
4. Conductors and insulators	
5. Real and virtual images	
V. DRAW THE DIAGRAMS OF THE FOLLOWING	(10)

- 1. Thermos flask
- 2. Reflection of light by a smooth surface.
- 3. Formation of image by a concave mirror when the object is at the center of curvature
- 4. Formation of image by a convex mirror when the object is at infinity
- 5. Annular solar eclipse

#### VI.GIVE REASON

- 1. Why is mercury used as a thermometric liquid?
- 2. Blocks of ice are covered with saw dust
- 3. There is a vacuum between the double walls of a thermos flask
- 4. Why are ventilators or exhaust fans usually placed near the ceiling of a room
- 5. Rest and motion are relative terms.

#### **VII. ANSWER THE FOLLOWING**

1. State the laws of reflection

2. What do you understand by the term lateral inversion? Write the word 'PHYSICS' as seen in a plane mirror.

3. Can you distinguish between a concave, convex and plane mirror only by seeing the images formed by them without touching it?

4. What is SONAR? What is the principle behind working of a sonar apparatus?

5. What are stringed instruments? List the factors on which the frequency of a vibrating string depends.

#### VIII. SOLVE

1. Calculate the speed of a moving car which travels 120 km in 2 hours.

2. A gun was fired 2.5 km away from an observer; the time taken by sound to reach the observer was 8 seconds. Find the speed of sound.

3. Convert 100 degree Centigrade into Fahrenheit and Kelvin.

4. The distance between the object and the plane mirror is 2 m. Calculate the distance between the object and the image.

5. The center of curvature of a spherical mirror is 28 cm. Calculate its focal length.

### (10)

## (10)

(10)