

TEST-4

SUBJECT: PHYSICAL SCIENCE

Academic Year-(2020-2021)

CLASS: X

CHAPTER-4: REFRACTION OF LIGHT AT CURVED SURFACES

NAME OF THE STUDENT: _____

ROLL NO: _____ MAX.MARKS:20

I. Answer the following questions**2x4=8**

1. Draw ray diagrams for the following positions of convex lens?

- A) Object is placed at
- F_2
- B) Object is placed at
- $2F_2$

(OR)

Draw various types of lenses

2. Fill the following table, which is related to convex lens (AS4)

| Position of the Object | Position of the Image | Real/Virtual image | Inverted/Erected image | Enlarged/Diminished image |
|------------------------|-------------------------|--------------------|------------------------|---------------------------|
| Beyond $2F_2$ | | | Inverted | Diminished |
| | Beyond $2F_1$ | Real | | Enlarged |
| At F_2 | Infinity | | Inverted | |
| | Same side of the Object | | Erected | Enlarged |

(OR)

Define the following

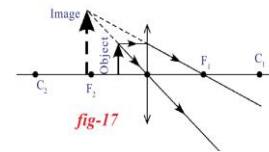
- A) Pole B) Focus C) Centre of curvature D) Focal length

II. Answer the following questions**3x2=6**

3. Frame any two questions to understand difference between convex lens and concave lens

4. What is a lens?

5. The Information given from the above figure, answer the following questions.



- Write the nature of the image?
- What is the lens shown in the figure?

III. Answer the following questions**3x1=3**

6. Write lens formula

7. Write the behavior of a light ray when it is passing through the optic centre of a convex lens

8. What are uses of lens?

IV. Answer the following questions**6x1/2=3**

9. Which one of the following materials cannot be used to make a lens?

- A) water B) glass C) plastic D) clay

10. Which lens is called converging lens?

11. P: Light ray passing along the principal axis is un deviated.

Q: Light ray passing through the focus is un deviated.

- P,Q both are correct
- P is correct, Q is incorrect
- P in correct, Q is correct
- P,Q both are incorrect

12. In which situation, the value of focal length of a convex lens is equal to the value of image distance

13. What we call when a line joins the centre of curvature and the pole of a curved surfaces?

14. Which lens can form Real and Virtual image ?