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|  GRADE: 10 CBSE | MAX TIME : 1 Hr  | MAX MARKS : 30 |
|  DATE: 11/06/23 | SUBJECT - SCIENCE(LIGHT) |   |

 SECTION A (2 MARKS EACH)

Question 1.
A man standing in front of a spherical mirror, finds his image having a very small head, a fat body and legs of normal size. What type of mirrors are used in these three parts?

Question 2.
Differentiate between virtual image formed by a concave mirror and of a convex mirror.

Question 3.
What is the value of THETA in the following ray diagram?
Answer:


 SECTION B(3 MARKS EACH)

Question 1.
List four characteristics of the images formed by plane mirrors?

Question 2 .
What do you understand by power of a lens? What is the relation between power of lens and its focal length? Write unit of power.

Question 3.
Find the size, nature and position of image formed when an object of size 1 cm is placed at a distance of 15 cm from a concave mirror of focal length 10 cm.

Question 4.
An object 4 cm in height, is placed at 15 cm in front of a concave mirror of focal length 10 cm. At what distance from the mirror should a screen be placed to obtain a sharp image of the object. Calculate the height of the image.

Question 5.
A truck uses a convex mirror as a viewfinder whose radius of curvature is 2.0 m.  A maruti car is coming behind the truck at a distance of 10 m. What will be the position of the image of the car and size of the image of the car when observed by the driver of the truck through the convex mirror?

Question 6.
Refractive index of water with respect to air is 4/3 and glass is 3/2. What is the refractive index of glass with respect to water?

Question 7.
An object kept at a distance of 60 cm from a lens gives a virtual image at a distance of 20 cm over the same side of the lens. What is the focal length of the lens? Is the lens converging or diverging?

Question 8.
An object 5 cm in length is held 25 cm away from a converging lens of focal length 10 cm. Draw the ray diagram and find the position, size and the nature of the image formed.