

Question 9

- (a) State three practical uses of ultrasonic vibrations. [3]
- (b) [3]
- A clock having marks instead of numbers on its dial appears to indicate 4:35 when viewed through a plane mirror. What is the correct time? Explain the anomaly.
 - Draw a neat ray diagram to illustrate how a concave mirror is used as a shaving mirror.
- (c) Answer the following questions: [4]
- Which mirror has the highest radius of curvature?
 - Which mirror (plane/spherical) has the least focal length?
 - What is the relation between the mirror radius and its focal length?
 - Why dish antennas are hemispherical in shape?

Question 10

- (a) A conductor is mounted on an insulating stand. A glass rod rubbed with silk is brought near the conductor (not touched). A proof plane is made to touch the surface of the conductor far from the rod and then, the proof plane is touched to the cap of a positively charged gold-leaf electroscope. What will be your observation? Give reason for it. [3]
- (b) Is dry cell really dry? Explain. [3]
- (c) [4]
- Two long needles are attached to the poles of a horse-shoe magnet. Show the positions occupied by the needles on a diagram and name the phenomenon which comes into play.
 - State one way in which magnetism can be lost.