

## **Section A**

### **Q1. Multiple Choice Questions (5 marks)**

1. A lens that diverges light rays is called a:  
a) Convex lens b) Concave lens c) Cylindrical lens d) Plano-convex lens
2. The power of a lens is measured in:  
a) Dioptre b) Candela c) Lumen d) Hertz
3. The process of extracting metals from their ores is called:  
a) Refining b) Metallurgy c) Calcination d) Roasting
4. The most reactive metal is:  
a) Gold b) Silver c) Copper d) Potassium
5. The process of coating iron with a layer of zinc to protect it from rusting is called:  
a) Galvanization b) Anodizing c) Electroplating d) Painting

## **Section B**

### **Q2. Short Answer Questions (10 marks)**

1. Define the terms: (i) Principal focus (ii) Focal length (iii) Optical center. (3 marks)
2. Explain the formation of image by a convex lens when the object is placed beyond 2F. (2 marks)
3. What is meant by the term metallurgy? (1 mark)
4. Describe the electrolytic refining of copper. (2 marks)
5. What are the different methods of prevention of corrosion? (2 marks)

## **Section C**

### **Q3. Long Answer Questions (10 marks)**

1. (5 marks) Derive the lens formula.
2. (5 marks) Explain the various steps involved in the extraction of metals from their ores.