

**Department of Applied Sciences & Humanities**  
**F.E. Sem-II Academic Year – 2025-26**  
**Question Bank for IA-II**

**Course Name- Engineering Materials**

1. Write the composition, properties and uses of the following alloys:

- a) Duralumin
- b) Dutch-metal
- c) Wood metal
- d) Gun-metal

2. Numerical from Alloy.

3. Explain the composition, properties & uses i) Borosilicate glass ii) Soda-lime glass iii) Optical glass.

4. What are the main properties of glass that make it unique?

5. Define Optical fibers. Explain their Construction with a labelled diagram & write any two applications of it.

6. Give the difference between Natural & Artificial abrasives with examples.

7. What are Conducting polymers? Explain Intrinsic Polymer in detail with example.

8. State the effects of adding following elements on special steels:

- i) Cr ii) Ni iii) W iv) Co v) Mn

9. Define Liquid Crystal Polymer & explain how its properties make it useful in electronics or automotive industries.

10. Explain Smart Polymers.