Section - 4

Ans-2 Various properties of plastics

1) Strength: They have low tensile strength. Their strength in compression is better than in tension. Tensile strength of thermoplasts generally ranges between 15 to 90 MPa.
2) High Temperature suitability: They have low melting point, therefore are unsuitable for high temperature usage, generally above 100°C.
3) Dimensional stability: It is poor due to creep effect at room temperature. At higher temperatures, this is poorer due to softening in them.
4) Whether Effect: They are susceptible to weather conditions. They suffer from distortions in moist conditions, and are highly affected by chemical environments.
5) Impact Strength: It is low which further decreases at higher temperatures due to softening.

B. Physical properties:

1) Colour: Some plastics are completely transparent. Using pigments plastics of any attractive colour can be produced.
2) Durability: Plastic offer great resistance to moisture and chemicals

and hence ~~convenient to handle~~ are more durable.

3) Fire Resistance : The phenol-formaldehyde and urea-formaldehyde plastics resists fire to a great extent and hence they are used as fire proofing materials.

4) Specific gravity : The specific gravity of plastics is very low and hence convenient to handle.

5) Ductility : The plastics are not ductile and hence they fail without giving warning.

Role of plastic in construction.

(i) Corrugated and plain sheets for roofing.
(ii) For making jointless flooring.
(iii) Flooring tiles, and overhead water tanks.
(iv) Bath and sink units, cistern ball floats.
(v) Decorative laminates and moulding.
(vi) window and door frames and shutters for bathroom doors.
(vii) pipes to carry cold water.
(viii) Lighting fixtures, electrical conduits, electrical insulators.