

Section-3

Ans-1

Paints

Paints are liquid compositions of pigments and binders which when applied to the surface in thin coats dry to form a solid film to impart the surface a decorative finish, apart from giving protection to the base material from weathering, corrosion and other chemical and biological attacks.

Varnishes

Varnish is the solution of resins or resinous substances like amber, Copal, shellac, gum resin etc., in solvents like oil, turpentine, alcohol etc.

It is commonly used on wooden surfaces. Varnishes provide a protected coating and gloss to the surface and intensify the wood grains.

Various ingredients of all the paints with the help of their different properties:-

* Bases:-

- (i) It is a principal constituent of paint. It also possesses the binding properties and forms an opaque coating.

- (ii) Commonly used bases for paints are white lead, red lead, zinc oxide, iron oxide, titanium, white aluminium powder and lithopone.
- (iii) A lead paint is suitable for painting iron and steel works as it sticks to them well.

* Vehicles :-

- (i) The vehicles are the liquid substances which hold the ingredients of paint in liquid suspension and allow them to be applied on the surface to be painted.
- (ii) Linseed oil, tung oil and nut oil are used as vehicles in paints. Of the above three oils, linseed oil is very commonly used as vehicles.
- (iii) Boiling makes the oil thicker and darker.

* Pigment :-

- (i) Pigment give required colour for paints. They are fine particles and have a reinforcing effect on thin film of the paint.
- (ii) They protect the paint film by reflecting the destructive ultra violet light which acts as a catalytic agent for the destructive oxidation of the film.
- (iii) They also improve the impermeability of the paint film.

* Drier :-

- (i) These are the compounds of metal like lead, manganese, cobalt.
- (ii) The function of a drier is to absorb oxygen from the air and supply it to the vehicle for hardening.
- (iii) The drier should not be added until the paint is about to be used.

* Thinner :-

- (i) It is known as solvent also. It makes paint thinner and hence increases the coverage.
- (ii) It helps in spreading paint uniformly over the surface. Turpentine and naphtha are commonly used thinners.
- (iii) After paint applied, thinner evaporates and paint dries.