Sample Question Paper

Course Name : Diploma in Surface Coating Technology

Course Code : SC

12358

Semester : First

Subject Title : Technology of Resins - 1.

Time : 3 Hours **Marks :- 100**

Instruction:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Use of calculator is permissible.
4. Draw neat sketches wherever necessary.
5. Assume additional data, if required.

Q.1) Attempt any Ten of the following: **20 Marks**

a) Define the term D.C.O.

b) Define The term ' Drying oils'

c) Define 'Hydrocarbon resins'

d) What is 'Coal-tar pitch'?

e) What is alkyd?

f) What is condensation Reaction?

g) Mention the types of polyester resin available.

h) What are curing agents?

i) Define " Novolac" resin.

j) Define the term ' Amino resins'.

k) Mention the range of Iodine values for Drying, Semi-drying, Non-drying oils.

l) Why lime reacted Rosin is called as 'Lime Hardened Rosin'?

Q.2) Attempt any Four of the following: **16 Marks**

a) Give the classification of oils with example on the basis for drying.

b) With neat structure of principal fatty acid; explain properties of linseed oil.

c) Explain the chemistry behind the drying mechanism of oil based binders.

d) Give only properties and application areas of shellac resin.

e) Explain the significance of Iodine value of oil, in the preparation of Varnish.

f) Write down any four film defects occurring in varnish film.

Q.3) Attempt any Four of the following: 16 Marks

a) Define 'Ester Gum' Describe the method of preparation of ester gum

b) Define the term ' Oleo-resinous varnishes' and explain its properties.

c) Define the term ' CNSL Resin' and describe the method of preparation of it.

d) What are 'Bituminous resins'? Give classification of it.

e) Describe the properties & application area's of 'CNSL Resin'

f) Compare the properties of different types of Alkyds.

Q.4) Attempt any Four of the following: 16Marks

a) Mention the properties and application area of Gilsonite

b) Give only the names of different raw materials used for preparation of Alkyd resins.

c) Explain the application areas of Alkyd resins.

d) Define the term Monoglyceride. How it's formation is confirmed during preparation of Alkyd? Explain.

e) What is Polyester resin? Give the names of raw materials used for preparation of Saturated Polyester resin.

f) Describe the method of preparation of Styrenated Alkyd.

Q.5) Attempt any Four of the following: 16 Marks

a) Give the properties and application areas of Saturated polyester.

b) Give only the names of Curing Agents used for saturated polyester resin.

c) Describe the method of preparation of Unsaturated polyester resin.

d) Give the names and structure of raw materials used for preparation of Urea-Formaldehyde resin.

e) Describe the method of preparation of Alkyd by 'Monoglyceride process'.

f) Describe the advantages & application areas of Styrenated alkyd.

Q.6) Attempt any Four of the following: 16 Marks

a) Give the names and structure of raw materials used for preparation of Melamine-Formaldehyde resin.

b) Compare Urea-Formaldehyde Versus Melamine-Formaldehyde resins.

c) Draw the Structure and describe the method of preparation of 'Resol'.

d) Give the properties and application areas of Phenolic resins.

e) Describe the application areas of 'Unsaturated Polyester Resin'.

f) Describe 'Oil soluble' & 'Spirit soluble' Phenolic Resins.