

1. Multiple choice questions

I. Which one among the following is used as red pigment (CO: 2)

- A. titanium dioxide
- B. iron oxide
- C. zinc oxide
- D. carbon black

ANSWER: B

II. Primer should have (CO: 2)

- A. high hiding characteristics
- B. high solvent resistance
- C. high compatibility with the surface and the base coat
- D. All of the above

ANSWER: D

III. Major problem associated with storing paint in container is (CO: 2)

- A. Oxidation
- B. Decolourisation
- C. Vaporisation
- D. Skin formation

ANSWER: D

IV. Which resin is majorly used to prepare decorative paints (CO: 2)

- A. alkyd
- B. acrylate
- C. silicone
- D. none of the above

ANSWER: B

V. Cluster formation can be prevented using (CO: 3)

- A. wetting agent
- B. dispersion agent
- C. both of them
- D. none of the above

ANSWER: C

VI. Hindered phenol is used to prevent (CO: 3)

- A. agglomeration
- B. coagulation
- C. craze formation

D. discoloration

ANSWER: D

VII. Settling tendency of the dispersed pigment can be reduced (CO: 3)

A. by imparting thixotropy to the system

B. Using surface active agent at a concentration of 1% of the pigment content

C. by increasing average specific volume of the pigment

D. all of the above

ANSWER: D

VIII. Pigment incorporation (CO: 3)

A. increases hardness of the film

B. reduces gloss

C. improve masking ability

D. all of the above

ANSWER: D

IX. Solvent incorporation results in (CO: 3)

A. reducing viscosity of the resin

B. enable ease of applications

C. improve gloss

D. all of the above

ANSWER: D

X. Alkyd resin contains (CO: 3)

A. ester linkage

B. amide linkage

C. ether linkage

D. any one of the above

ANSWER: A

XI. Alkyd resin can be synthesized by (CO: 3)

A. addition polymerization

B. step polymerization

C. cationic polymerization

D. coordination polymerization

ANSWER: B

XII. Raw materials used to manufacture alkyd resins are (CO: 3)

A. phthalic anhydride and ethylene diamine

- B. phthalic anhydride and pentaerythritol
- C. Ethyl acrylate and pentaerythritol

2. Answer the following questions

- A) What are the differences between varnish and coating?
- B) Why varnish can't be used to develop paint for exterior coating.
- C) What is the function of anti-skinning agent?
- D) What is the way to effectively mask surface imperfections?
- E) Match the column A and B with proper justification.
- F) Compare the functionality of primary and secondary antioxidant.
- G) Outline the pigment dispersion process.
- H) Compare the different types of oil used to manufacture alkyd resins and State the characteristic of oil free alkyd.
- I) Illustrate the importance of the following additive:
 - (i) Wetting agent
 - (ii) Antifoam additive
 - (iii) Aluminium soap
 - (iv) Cobalt