

SC

102
A-122

PS04CSCT02: Technology of Printing Inks & Heavy Duty Protective Coatings.

Total Marks: 70

- N.B. (1) Marks allotted to the question are on its RHS
 (2) Illustrate your answers wherever necessary with the help of neat sketches & chemical equations

Q.1 Choose the correct Answer from the Followings:

1. Which printing process has water fountain? [01]
 a) Letterpress b) Offset Lithography
 c) Flexographic d) Screen

2. Bank note, security printing is done by _____ [01]
 a) Letterpress b) Intaglio
 c) Flexographic d) Screen

3. Which properties of the printed and dried ink on the substrate improve by the addition of a wax? [01]
 a) Surface-slip b) Rub-resistance
 c) Scuff-resistance d) All of these

4. The incorporation of a wax into an ink results in _____ in gloss of the print. [01]
 a) increase b) decrease
 c) remain same d) none of these

5. Select the wrong classification in case of atmosphere classification of corrosion [01]
 a) C1 - Heated buildings and neutral atmosphere
 b) C5M - Marine, offshore, estuaries, coastal areas with high salinity
 c) C2 - Rural areas, low pollution
 d) None of them

6. Pick the odd one with respect to corrosion Classification. [01]
 a) Uniform b) Galvanic
 c) Pitting d) Intergranular

7. Which is not a corrosion cell? [01]
 a) Microbial corrosion cells b) Surface film cells
 c) concentration cells d) Oxygen concentration cells

8. Which is the right partial size of LA type glass flake? [01]
 a) 3.0 – 7.0 Micron b) 1.0 – 3.0 Micron
 c) 2.0 – 5.0 Micron d) 7.0 – 10. 0 micron

Q.2 Answer any seven of the Followings:

[14]

1. Draw the pitting corrosion shape according to ASTM G – 46.
2. Give classification of impact printing process.
3. Explain the sacrificial effect in Zinc and chrome base primer?
4. Explain the principle by which lithography printing process works.
5. Give the short note on change in properties with the change in particle size of glass flake in glass flake coating.
6. What is meant by 'Offset' in Offset lithography printing?
7. Write the mechanism of uniform corrosion?
8. Define Piezo inkjet process.
9. Give classification of non-impact printing process.

- Q.3 (a) Explain the Galvanic Series and effecting factor of the rate of corrosion. [06]
(b) Explain the Galvanic corrosion cells, Concentration corrosion cells and Oxygen concentration corrosion cells. [06]

OR

- (b) Write a note on Fusion bond epoxy coating. [06]

- Q.4 (a) Write a note on Glass flake coating. [06]
(b) Give the classification of different corrosive environment and list the all possible losses of corrosion in industry. [06]

OR

- (b) What is the different between electrodeposition cell and corrosion cell and write a short note on galvanic corrosion. [06]

- Q.5 (a) What are the different methods by which ink dry? Discuss in detail. [06]
(b) Describe Gravure printing process in detail. [06]

OR

- (b) Explain in detail about inks for Non-Impact Printing process. [06]

- Q.6 (a) Discuss in detail factors that affect ink formulation. [06]
(b) Write a note on electrophotography printing process. [06]

OR

- (b) Briefly explain about inkjet printing process with flow chart. [06]
