

- 6 a. Write a note on corrosion inhibitors. 6
- b. Mention the technological importance of metal finishing. Explain electroless plating of C_u on PCB. 8
- c. Explain the effect of the organic additives on the nature of electro deposit. 6

UNIT - IV

- 7 a. Describe the following properties of a lubricant : 6
- i) Volatility ii) Pour point iii) Cloud point.
- b. Give the synthesis and applications of polyurethane and Butyl rubber. 6
- c. Explain the synthesis, properties and applications of ureaformaldehyde formaldehyde resins. 8
- Mention the disadvantages of plastics.
- 8 a. Write a note on compounding of rubber. 6
- b. Give the synthesis and applications of conducting polyaniline. 6
- c. Explain the following properties of cement : 8
- i) Shrinkage ii) Setting Time
- iii) Soundness iv) Quality.

UNIT - V

- 9 a. What are the boiler scales? How are they formed? Explain their ill effects. 8
- b. Define COD and BOD. Compute COD of 25 ml of an effluent which consumes 15.0 ml of 0.025 M $K_2Cr_2O_7$ for complete oxidation. 6
- c. Explain the sewage treatments of water. 6
- 10 a. Discuss the types of mesophases in liquid crystals. 8
- b. Explain the prevention of boiler scales by internal methods. 6
- c. What is desalination? Explain the desalination of water by electro dialysis. 6

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