

Bachelor of Science (B.Sc.) Semester—IV (C.B.S.) Examination

INDUSTRIAL CHEMISTRY (ICH-401)

Paper—I

Time : Three Hours]

[Maximum Marks : 50

N.B. :— (1) All **FIVE** questions are compulsory and carry equal marks.

(2) Give diagrams and chemical reactions wherever necessary.

- | | |
|--|---|
| 1. (A) Explain the process of galvanization used in hot dipping process. | 5 |
| (B) Describe the process of electroplating with suitable diagram. | 5 |

OR

- | | |
|--|----|
| (C) What are requirements for depositing electrolyte ? | 2½ |
| (D) What are the advantages of metal spraying ? | 2½ |
| (E) Explain the term vapour deposition. | 2½ |
| (F) Explain metallic coating with example. | 2½ |
| 2. (A) What are the requirements of good paint ? | 5 |
| (B) Explain the different types of varnishes with suitable examples. | 5 |

OR

- | | |
|---|----|
| (C) Explain the various types of pigments used for making paints. | 2½ |
| (D) Give the Industrial applications of paints. | 2½ |
| (E) Write the process of manufacture of enamels. | 2½ |
| (F) Write notes on paint remover. | 2½ |
| 3. (A) Explain the extraction and purification process of juice. | 5 |
| (B) Explain the manufacture of leather. | 5 |

OR

- | | |
|---|----|
| (C) How will you prepare cane sugar from molasses ? | 2½ |
| (D) Describe preparation of hides for tanning. | 2½ |
| (E) Write a note on oil tanning. | 2½ |
| (F) Draw neat diagram of extraction of juice from cane sugar. | 2½ |

4. (A) What is semiconductor ? Explain intrinsic and extrinsic semiconductor with suitable example. 5

(B) What are the basic requirements of electrical insulating material ? Give their classification. 5

OR

(C) Explain degenerate semiconductor on the basis of Band theory. $2\frac{1}{2}$

(D) Write a note on dielectric materials. $2\frac{1}{2}$

(E) What are Superconductors ? Give their properties. $2\frac{1}{2}$

(F) Differentiate between conductors and semiconductors. $2\frac{1}{2}$

5. Solve any **TEN** of the following :

(i) What are the uses of vapour deposition ?

(ii) What is acid cleaning in electroplating ?

(iii) What is clod metal ?

(iv) Write only physical properties of white lead.

(v) What are the aluminium paints ?

(vi) Write the uses of varnishes.

(vii) Give any two drying agents used in preparation of sugar.

(viii) Define refining.

(ix) What are the by-products obtained in chrome tanning ?

(x) What are n-type semiconductors ?

(xi) Write any two properties of superconductors.

(xii) What do you mean by insulation ? $1 \times 10 = 10$