

Fourth Semester Bachelor of Science (B.Sc.)
Examination

INDUSTRIAL CHEMISTRY

Paper- I (ICH 401)

Time : Three Hours]

[Max. Marks : 50

- N. B. : (1) All five questions are compulsory and carry equal marks.
(2) Give neat and well labelled diagram wherever necessary.

1. (A) Explain the hot dipping process of galvanization. 5
(B) Write the various applications of electroplating of metals. 5

OR

- (C) Explain the impregnated coating. $2 \frac{1}{2}$
(D) What is metallic coating ? Give examples. $2 \frac{1}{2}$
(E) Explain the metal cladding with suitable examples. $2 \frac{1}{2}$
(F) Give the preparation of electroplating material using alkali cleaning process. $2 \frac{1}{2}$

(A) Explain the classification of paints on the basis of their applications. 5

(B) Explain the ingredients of enamels with suitable examples. 5

OR

(C) Explain the process of manufacture of enamels. $2 \frac{1}{2}$

(D) What are the characteristics properties and uses of white lead pigments? $2 \frac{1}{2}$

(E) What are various industrial applications of paints? $2 \frac{1}{2}$

(F) What are the requirements of good paint? $2 \frac{1}{2}$

(A) Explain the process of extraction and purification of juice in the manufacture of cane sugar. 5

(B) Explain the preparation of hides for tanning in the manufacture of Leather. 5

OR

(C) Describe the method of estimation of sugar. $2 \frac{1}{2}$

(D) Explain the diffusion principle in manufacturing of cane sugar from beet root. $2 \frac{1}{2}$

(E) Explain the vegetable tanning with suitable example. $2 \frac{1}{2}$

(F) Write short notes on oil tanning. $2 \frac{1}{2}$

- (A) Explain doped or impurity semiconductor. Give the types of semiconductors. 5
- (B) Explain in detail about polyethylene which is a synthetic dielectric material. 5

OR

- (C) Give the types of insulating material. $2 \frac{1}{2}$
- (D) Write the difference between conductors and semiconductors. $2 \frac{1}{2}$
- (E) Explain the superconductors on the basis of their properties. $2 \frac{1}{2}$
- (F) Give the dielectric properties of insulating material. $2 \frac{1}{2}$

5. Attempt any Ten of the following :—

- (i) Write any two metals used for electroplating process.
- (ii) What is electroforming ?
- (iii) What do you mean by spray metal coating ?
- (iv) What are luminous paints ?
- (v) Why pigments are used for making paints ?
- (vi) Give the examples of paint removers.
- (vii) Give the test for sugar.
- (viii) What is raw sugar ?
- (ix) Define Leather.
- (x) Give the examples of semiconductor.
- (xi) What are n-type semiconductor ?
- (xii) What do you mean by degenerate semiconductor ?

1 x 10