

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. $2 \frac{1}{2}$

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- (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 and 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 a 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. $2 \frac{1}{2}$

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- 12 (A) Explain in detail about an intrinsic 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 ?

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