

**Bachelor of Science (B.Sc.) Semester—IV (C.B.S.)**  
**Examination**  
**INDUSTRIAL CHEMISTRY**  
**Paper—I (ICH-401)**

Time—Three Hours] [Maximum Marks—50

**N.B. :—** (1) All **FIVE** questions are compulsory and carry equal marks.  
(2) Give neat and well labelled diagrams wherever necessary.

1. (A) What is metal cladding ? Explain in detail with examples. 5  
(B) What is means by electroplating ? Discuss electroplating with examples. 5

**OR**

(C) What is cementation ? Explain. 2½  
(D) What are the advantages metal spraying ? 2½  
(E) Write a note on metallic coatings. 2½  
(F) What is hot dipping ? Explain with example. 2½

2. (A) Explain green pigment with examples. 5  
 (B) Discuss manufacturing process of paint. 5

**OR**

(C) What are the applications of paint ? 2½  
 (D) Write a note on metallic pigments. 2½  
 (E) Discuss enamels with suitable examples. 2½  
 (F) What are the characteristics of paints ? 2½

3. (A) Explain in detail vegetable tanning with examples. 5  
 (B) Discuss manufacturing of sucrose from beetroot. 5

**OR**

(C) Describe the method for testing of sugar. 2½  
 (D) Draw the diagram of extraction of juice from cane sugar. 2½  
 (E) Write a note on chrome tanning. 2½  
 (F) Give the preparation of calotex. 2½

4. (A) Discuss classification of semiconductors with examples. 5  
 (B) Explain in detail synthetic dielectric material. 5

(C) Write a note on P-type semiconductors. 2½  
 (D) Give the different types of insulating material. 2½  
 (E) Discuss with example, conductors and semiconductors. 2½  
 (F) Explain in short, an electrical insulating material. 2½

5. Attempt any **TEN** of the following :—

(i) Give the example of sprayed metal coating reagent.  
 (ii) What is chemical reaction in metallic coating ?  
 (iii) Write chemical reagent for electroplating.  
 (iv) What is, basic constituent of paint ?  
 (v) Why are pigments used for making paint ?  
 (vi) Give the example of paint removal.  
 (vii) What is raw sugar ?  
 (viii) Give the structural formula of sucrose.  
 (ix) What is meant by oil tanning ?  
 (x) What is mean by conductor ?  
 (xi) Give any two names of insulating agents.  
 (xii) Give the example of n-type semiconductor.

$1 \times 10 = 10$

**OR**