



A Charutar Vidya Mandal's Institution
V.P. & R.P.T.P. SCIENCE COLLEGE
 (AUTONOMOUS) (Grant-in-Aid)
 Affiliated to Sardar Patel University
 VALLABH VIDYANAGAR-388120



Bachelor of Science (Semester II) External Examination - 2025
US02MAICV01 : INDUSTRIAL CHEMISTRY

Date: 08-04-2025 (Day: TUESDAY)

Time: 2:00 P.M to 4:30 P.M.

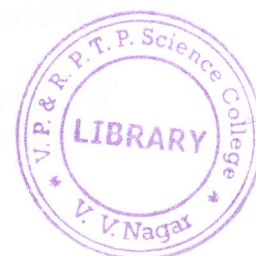
Total marks :50

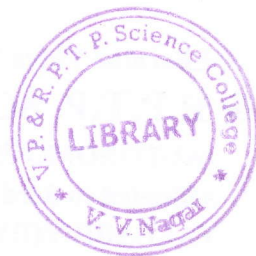
Note: Figures to the right indicate marks of the question.

Q-1 Write the most appropriate answer from the following multiple-choice questions.

[10]

- 1 is the measure of a material's ability to resist scratching or indentation.
 (a) Toughness (b) Elasticity
 (c) Hardness (d) Plasticity
- 2 is the best conductor of electricity.
 (a) Copper (b) Rubber
 (c) Wood (d) Glass
- 3 is used to strengthen glass by controlled heating and rapid cooling.
 (a) Annealing (b) Tempering
 (c) Lamination (d) Frosting
- 4 Which of the following is the most common method used to manufacture bulletproof Glass?
 (a) Heat Treatment (b) Laminating Layers of Glass and Plastic
 (c) Cold Pressing (d) Casting
- 5 is the integral part of Tunnel Dryer.
 (a) Atomizer (b) Trays
 (c) Chamber (d) Exhaust System
- 6 equipment is used for size reduction.
 (a) Shieve Shaker (b) Vibratory Screeners
 (c) Jaw Crusher (d) Centrifugal Screener
- 7 The operation which is used to separate liquid-liquid mixture is called.....
 (a) Adsorption (b) Distillation
 (c) Evaporation (d) Extraction
- 8 What is the primary cause of Water Hardness?
 (a) Presence of dissolved Gases (b) Presence of dissolved minerals mainly Calcium and Magnesium
 (c) High Temperature (d) Presence of Organic Compound
- 9 The Hardness of water is expressed by usingUnit.
 (a) PPM (b) A.M.U.
 (c) B.T.U. (d) Litre
- 10 The corrosion caused by CO₂ present in Hard water is known as.....
 (a) Galvenic Corrosion (b) Crevice Corrosion
 (c) Pitting Corrosion (d) Stress Corrosion





- Q-2 Write the answer of following long Questions.** [10]
[A] Describe the factors influencing the selection of materials for industrial application.
[B] Compare ferrous metals, non-ferrous metals and alloys based on their application.
OR
[A] Explain the properties and uses of Zinc in manufacturing and constructions.
[B] Explain the properties and uses of Platinum in industrial and scientific fields.
- Q-3 Write the answer of following long Questions.** [10]
[A] Describe the Primary raw materials used in cement Industries.
[B] Describe the Physical and Chemical Properties of Glass?
OR
[A] Classify the different types of cement and mention one application of each.
[B] Describe the various types of glass and their uses.
- Q-4 Write the answer of following long Questions.** [10]
[A] Sketch the following dryers (i) Tray Dryer (ii) Spray Dryer.
[B] Sketch a Fractionating Column.
OR
[A] Sketch the centrifugal and single acting reciprocating pump.
[B] Draw the diagrams for Horizontal and Vertical Evaporators.
- Q-5 Write the answer of following long Questions.** [10]
[A] Describe the Disadvantages of Hard Water.
[B] Enlist various methods for Softening of Hard Water. Explain any one.
OR
[A] Describe various major problems in the boiler due to Hard Water.
[B] Name various methods for boiler water treatment. Explain any one.