

(6 pages)

Reg. No. :

Code No. : 20071 E Sub. Code : CSCH 42

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2025.

Fourth Semester

Chemistry

Skill Based Subject – INDUSTRIAL CHEMISTRY

(For those who joined in July 2021 and 2022 only)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Which is the purest form of natural water
(a) Rain water
(b) Spring water
(c) River water
(d) Sea water

2. What is the use of alum in drinking water preparation?
(a) Sedimentation (b) Sterilization
(c) Softening (d) Decolouriser
3. The composition of power alcohol is _____.
(a) 80% petrol + 20% alcohol
(b) 70% petrol + 30% alcohol
(c) 90% petrol + 10% alcohol
(d) 85% petrol + 15% alcohol
4. _____ are solvents used to fix tissue specimens and rinse stains.
(a) Isoprene (b) Butadiene
(c) Vinyl acetate (d) Xylene
5. A photovoltaic cell is commonly called a _____ cell.
(a) Fuel (b) Solar
(c) Polymeric (d) None of these
6. _____ is an example of electrical rigid insulators.
(a) Bakelite (b) Gold
(c) Metals (d) Animal foil

7. _____ is either chemical or electrochemical in nature.
(a) Erosion (b) Abrasion
(c) Corrosion (d) All the above
8. _____ is used for preventing the formation of hard deposit in the paints.
(a) Anti-skinning agents
(b) Fillers
(c) Pigments
(d) Toners
9. In the manufacture of shoe polishes _____ are the ingredients.
(a) Cellulose
(b) Waxes
(c) Graphite
(d) Crayons
10. _____ are most essential consumable item and is manufactured from plaster of paris.
(a) Pen ink
(b) Sulphide
(c) Wax
(d) Chalk crayons

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.

11. (a) How is water softened using ion-exchange method?
Or
(b) Write short notes on reverse osmosis.
12. (a) Explain the following :
(i) LPG
(ii) CNG
Or
(b) Write any two applications for
(i) Toluene
(ii) Xylene
13. (a) Write about the classification of insulating materials.
Or
(b) Explain the characteristics of Battery.

14. (a) Mention the composition of paints.

Or

(b) Illustrate the cathodic protection.

15. (a) Write short notes on Agarbattis.

Or

(b) Explain about gum paste.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 600 words.

16. (a) Discuss the method of softening of water by lime soda process.

Or

(b) Explain :

- (i) Temporary hardness of water
- (ii) Permanent hardness of water

17. (a) Explain the following :

- (i) Power alcohol
- (ii) Bio gas

Or

(b) Give a detailed account for the composition of crude petroleum.

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18. (a) Summarize on the Lead Acid Battery.

Or

(b) Discuss about the following :

- (i) Fuel cell
- (ii) Solar cell

19. (a) Give an account on the chemical and electro chemical corrosion.

Or

(b) Explain the following :

- (i) Vehicle oils
- (ii) Pigments.

20. (a) Write short notes on :

- (i) Chalk crayons
- (ii) Wax candles

Or

(b) Discuss in detail about the shoe polish and its precautions.

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