

(6 Pages)

Reg. No. :

Code No. : 10455 E Sub. Code : CSCH 42

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2023.

Fourth Semester

Chemistry

Skill Based Subject — INDUSTRIAL CHEMISTRY

(For those who joined in July 2021 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Hardness of water is measured in terms of

- (a) gm/litre (b) mgm/litre
(c) ppm (d) none of the above

2. Brackish water contain dissolved salts

- (a) Ca - salts (b) Mg salts
(c) NaCl (d) Zn - salts

3. LPG mainly contains

- (a) methane and ethane
(b) propane and butane
(c) ethane and propane
(d) methane and butane

4. The odurant mixed with LPG is

- (a) H₂S (b) Ozone
(c) Chlorine (d) Mercaptane

5. The OCV of H₂ – O₂ fuel cell is

- (a) 1.0 V (b) 1.1 V
(c) 1.2 V (d) 1.5 V

6. Which of the following material is used in solar cell

- (a) Barium (b) Silicon
(c) Silver (d) Selenium

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7. The constituents of a paint is
(a) filler (b) pigment
(c) thinner (d) all the above
8. The ships in sea are protected from corrosion by
(a) aniodic protection (b) cathodic protection
(c) dederation (d) anodic inhibitor
9. The colouring agent used for the preparation of red ink is
(a) malachite green (b) ink blue crystals
(c) eosine y (d) nigrosine crystals
10. ——— is made from potato starch.
(a) Gum paste (b) Tooth paste
(c) Agarbattis (d) Mouth balls

PART B — (5 × 5 = 25 marks)

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

11. (a) Write the disadvantages of hardness of water.
Or
(b) Explain estimation of temporary hardness of water by 'O' Hehner's method.

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12. (a) Define biogas, mention its uses.

Or

- (b) What are synthetic fuels? Give examples write their preparation by polymerisation.

13. (a) What are dielectric materials? Mention their main properties.

Or

- (b) Explain the working of lithium battery.

14. (a) Write the mechanism of wet corrosion.

Or

- (b) Describe galvanization.

15. (a) Write the preparation and properties of wax candle.

Or

- (b) Describe the preparation and uses of shoe polish.

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PART C — (5 × 8 = 40 marks)

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

16. (a) Explain zeolite process of removing water hardness.

Or

- (b) How are ions of the salt from the salt water separated by electrodialysis?

17. (a) Write the different types of petroleum products and their applications.

Or

- (b) What is power alcohol? How is it manufactured?

18. (a) Explain hydrogen - oxygen fuel cell.

Or

- (b) Briefly explain the working of a solar cell.

19. (a) Write the differences between galvanizing and tinning.

Or

- (b) Explain electroplating.

20. (a) Discuss the preparation and uses of plaster of paris, writing ink.

Or

- (b) Write the preparation and uses of silicon carbide crucible, safety matches.
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