

(6 pages)

Reg. No. :

Code No. : 20340 E Sub. Code : CECH 54

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

Fifth Semester

Chemistry

Major Elective — APPLIED 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. The major constituent of Natural gas is _____.
(a) CH₄ (b) H₂
(c) CO (d) N₂
2. Knocking is the property of _____ fuel.
(a) Solid (b) Liquid
(c) Gaseous (d) All the above

3. Thinners used in paints are
(a) Turpentine
(b) Methylated naphthalene
(c) Petroleum spirits
(d) All the above
4. Fine retardant paints contain _____.
(a) Chlorinated organic compound
(b) Naphthalene
(c) Turpentine
(d) None of the above
5. The percentage of nitrogen in Urea is
(a) 24 (b) 46
(c) 82 (d) 94
6. Bordeaux mixture is a _____.
(a) Fungicides (b) Acaricides
(c) Herbicides (d) Insecticides

7. Which of the following represents soap?
(a) $C_{17}H_{35}COOK$ (b) $C_{17}H_{35}COOH$
(c) $C_{15}H_{31}COOH$ (d) $(C_{17}H_{15}COO)_2Ca$
8. Which of the following enhances lathering property of a soap?
(a) Sodium carbonate
(b) Sodium rosinate
(c) Sodium stearate
(d) Tri sodium phosphate
9. Potash-lead glass is a mixture of _____.
(a) calcium and potassium silicate
(b) lead silicate and calcium silicate
(c) Sodium silicate and potassium silicate
(d) Lead silicate and potassium silicate
10. Which of the following is used to give amber colour to glass?
(a) $CdS + Se$ (b) Cu_2O and CuO
(c) NiO (d) Na_2S

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PART B — (5 × 5 = 25 marks)

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

11. (a) Compare solid propellant and liquid propellant?
Or
(b) What are characteristic of good fuel?
12. (a) Give the classification of adhesives with example.
Or
(b) Give the functions of lubricants.
13. (a) How is urea prepared?
Or
(b) How is BHC prepared? Mention its uses.
14. (a) Discuss the role of surfactants in laundry detergents.
Or
(b) Give the types of soaps with their specific uses.

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[P.T.O.]

15. (a) Give the classification of cement?

Or

(b) How Glasses get coloured?

PART C — (5 × 8 = 40 marks)

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

16. (a) Write a note on thermal and catalytic cracking.

Or

(b) Give the significance of (i) Octane Number
(ii) Cetane Number.

17. (a) Write about emulsion paint and fire retardant paint.

Or

(b) Give the characteristic and uses of TiO_2 and ultramarine blue.

18. (a) Explain the classification and uses pesticides with example.

Or

(b) Give the manufacture of (i) Triple super phosphate (ii) NPK fertilizer.

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19. (a) Give the difference between Oil and Fat.

Or

(b) Explain the types of detergents with examples.

20. (a) Explain the manufacture of Safety Matches.

Or

(b) Describe the manufacture of Portland Cement.

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