

23/12/24

(6 pages)

Reg. No. :

Code No. : 30484 E Sub. Code : CACH 21

(LA) B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2024

Second/Fourth Semester

Chemistry — Allied

ALLIED CHEMISTRY — II

(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.

- EDTA is a _____ ligand.
(a) -Bidentate (b) Tridentate
(c) Pentadentate (d) Hexadentate
- The precipitant used in the gravimetric estimation of nickel is
(a) EDTA (b) DMG
(c) Oxine (d) None of the above
- Hybridization in acetylene is
(a) sp (b) sp²
(c) sp³ (d) sp³d
- Maleic acid and Fumaric acid show this type of Isomerism?
(a) Geometrical Isomerism
(b) Optical Isomerism
(c) Ligand Isomerism
(d) None of the above
- Rusting of Iron is an example of
(a) Alloy (b) Oxidation
(c) Corrosion (d) Coating
- pH scale is
(a) 0-14 (b) 0-10
(c) 7-14 (d) 1-14
- The number of Hydroxyl groups in glucose is
(a) 6 (b) 5
(c) 7 (d) 8

8. An example for Toxic protein is
(a) Ferritin (b) Insulin
(c) Snake Venom (d) Histones
9. Tuberculosis is a _____ disease.
(a) Insect-borne (b) Air-borne
(c) Water-borne (d) All the above
10. The leaves of Keezhanelli contains
(a) Phyllanthin
(b) Tetracyclin
(c) Amoxycillin
(d) None of the above

PART B — (5 × 5 = 25 marks)

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

11. (a) Explain Chelate Effect with examples.
Or
(b) Explain the Biological role of Chlorophyll in detail.

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12. (a) Explain Resonance effect in detail with examples.

Or

- (b) Explain the Optical Isomerism of Tartaric acid.
13. (a) Explain Ostwald dilution law.

Or

- (b) Write notes on calomel electrode.
14. (a) Explain Iso electric point in detail with example.

Or

- (b) Discuss the structure of proteins in detail.
15. (a) Write notes on Insect-borne diseases.

Or

- (b) Explain in detail about Indian Medicinal Plants.

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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 the application of EDTA in qualitative and quantitative analysis.

Or

- (b) Discuss the preparation, classification and structure of metal carbonyls.

17. (a) Write notes on :

- (i) Inductive Effect
(ii) Hyper Conjugation.

Or

- (b) Discuss sp^3 , sp^2 and sp hybridization with suitable examples.

18. (a) Define pH. How will you determine pH of a solution using glass electrode?

Or

- (b) What is corrosion? Explain any four methods for its prevention.

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19. (a) Discuss the classification of carbohydrates with examples.

Or

- (b) Explain the classification, preparation and reactions of amino acids.

20. (a) Write short notes on :

- (i) Whooping Cough
(ii) Cholera.

Or

- (b) Write notes on Diabetes and its treatment.

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