

(FOR THE CANDIDATES ADMITTED
DURING THE ACADEMIC YEAR 2022 ONLY)

SUB CODE 22UPS4A5/22UBY4A5/22UZY4A5

REG.NO. :

N.G.M. COLLEGE (AUTONOMOUS): POLLACHI

END-OF-SEMESTER EXAMINATIONS: MAY 2024

B.Sc CHEMISTRY

MAXIMUM MARKS: 50

SEMESTER: IV

TIME: 3 HOURS

PART - III

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ALLIED CHEMISTRY PAPER – II INORGANIC, ORGANIC AND PHYSICAL
CHEMISTRY

SECTION – A

(10 X 1 = 10 MARKS)
(K1)

Answer the Following Questions

1. Which one of the following is liquid fuel?

- a) coal b) petroleum c) charcoal d) coal gas

2. Identify azo dye in the following. _____

- a) methyl orange b) alizarin c) picric acid d) phenolphthalein

3. Which one of the following is an essential amino acid?

- a) tyrosine b) glycine c) alanine d) valine

4. Cellulose is made up of _____ units.

- a) α -glucose b) β -glucose c) fructose d) sucrose

5. Colloidal solutions are classified on the basis of _____

- a) organic or inorganic b) surface tension value c) molecular size d) pH

Answer the Following in One (Or) Two Sentences

(K2)

6. What is the composition of LPG?

7. Mention one example for natural polymer.

8. What is DNA?

9. Write any two uses of starch.

10. Define catalysis.

(CON..2)

SECTION – B**(5 X 3 = 15 MARKS)****Answer Either (A) Or (B) in Each of the Following Questions. (K3)**

11. a) Write a note on natural gas.

(OR)

b) Define the following with example. (i) soft glass (ii) pyrex glass

12. a) Describe the synthesis of alizarin.

(OR)

b) Sketch the preparation of Buna-S rubber with uses.

13. a) Write the preparation of glycine by Gabriel synthesis.

(OR)

b) Describe the following colour tests for proteins. (i) Biuret test (ii) Ninhydrin test

14. a) How will you convert glucose to fructose?

(OR)

b) List the uses of cellulose.

15. a) Describe the mechanism of catalytic action.

(OR)

b) Define the following terms. (i) Phase (ii) Component (iii) Degree of freedom

SECTION – C**(5 X 5 = 25 MARKS)****Answer Either (A) Or (B) in Each of the Following Questions. (K4 /K5)**

16. a) Describe the manufacturing process of urea.

(OR)

b) Illustrate the manufacturing process of cement by wet process.

17. a) Discuss the classification of dyes based on its application.

(OR)

b) Explain the preparation and uses of nylon-6,6 polymer.

18. a) Analyze the synthesis of glycylalanine by carbobenzoxy method.

(OR)

b) Explain the structure of proteins.

19. a) Elucidate the structure of glucose.

(OR)

b) Illustrate the properties and structure of sucrose.

20. a) Explain the preparation and properties of colloids.

(OR)

b) Draw and explain phase diagram of water.