(NO. OF PAGES: 2)

(FOR THE CANDIDATES ADMITTED **20UPS4A4/20UBY4A5/20UZY4A5**

DURING THE ACADEMIC YEAR 2020 ONLY) **REG.NO. :**

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

END-OF-SEMESTER EXAMINATIONS: JULY-2022

B.Sc.-CHEMISTRY **MAXIMUM MARKS: 70**

IV SEMESTER **TIME: 3 HOURS**

PART - III

INORGANIC, ORGANIC AND PHYSICAL CHEMISTRY

SECTION – A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

MULTIPLE CHOICE QUESTIONS. (K1)

1. LPG contains_____.

a) Methane b) Ethane c) propane and butane d) methane and butane

2. Identify the thermosetting plastic from the following_____.

a) Nylon b) PVC c) Teflon d) Bakelite

3. Glycine upon treatment with benzoyl chloride gives_____.

a) Aceturic acid b) Hippuric acid c) Acetic acid d) Malonic acid

4. Fructose is obtained by the hydrolysis of_____.

a) Inulin b) n-hexane c) Glucose d) Acetyl chloride

5. Number of phases at the triple point of water is_____.

a) 0 b) 1 c) 2 d) 3

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES (K2)

6. Define calorific value of a fuel.
7. Give any two examples for chromophore.
8. Write the formula for glycine.
9. Mention the two uses of starch.
10. What are colloids?

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SECTION – B (5 X 4 = 20 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

11. a) Illustrate about the characteristics of a good fuel.

(OR)

b) Give an account on setting of cement.

12. a) How Indigo Dye is prepared? Explain.

(OR)

b) Write notes on Inorganic polymers.

13. a) What are amino acids? Mention any two general chemical properties of amino acids.

(OR)

b) Define proteins. How are they classified?

14. a) Compare glucose and fructose based on their chemical reaction.

(OR)

b) How sucrose is prepared? Give its uses.

15. a) Explain the optical property of colloid.

(OR)

b) List out the characteristics of catalysts.

SECTION - C (4 X 10 = 40 MARKS)

ANSWER ANY FOUR OUT OF SIX QUESTIONS

(16th QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS

(FROM Qn. No : 17 to 21) (K4 (Or) K5)

16. Write in detail the wet and dry process of manufacturing of cement.
17. Explain the urea and ammonium phosphate synthesis process.
18. Discuss the preparation and uses of (i) PVC (ii) Teflon.
19. Explain the steps involved in the Bergmann method of synthesizing peptides.
20. Elucidate the structure of glucose.
21. Draw and explain the phase diagram of water system.

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