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(FOR THE CANDIDATES ADMITTED

SUB CODE **22UCY510**

DURING THE ACADEMIC YEAR 2022 ONLY)

REG.NO. :

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

**END-OF-SEMESTER EXAMINATIONS : NOV-2024**

**B.Sc CHEMISTRY**

**MAXIMUM MARKS: 50**

**SEMESTER: V**

**TIME : 3 HOURS**

**PART - III**

**22UCY510– DYE CHEMISTRY**

**SECTION – A**

**(10 X 1 = 10 MARKS)**

**ANSWER THE FOLLOWING QUESTIONS.(K1)**

1. Electromagnetic waves varies from \_\_\_\_\_ to \_\_\_\_\_
  - a) Meters to nano-meters
  - b) Meters to micro-meters
  - c) Nano to micro-meters
  - d) Centimeters to nano-meters
2. An azo dye is formed by interaction of an aromatic diazonium chloride with
  - a) Phenol
  - b) An aliphatic primary amine
  - c) Benzene
  - d) Nitrous acid
3. Which of the following is a triphenyl methane dye?
  - a) alizarin
  - b) Indigo
  - c) Aniline yellow
  - d) Malachite green
4. Which of the following is a basic dyes
  - (a) Congo Red
  - (b) Aniline Yellow
  - (c) Alizarin
  - (d) Indigo
5. The dyes which are applied to the fabric in the colourless reduced state and then oxidised to coloured state are called
  - (a) Vat dyes
  - (b) Disperse dyes
  - (c) Triphenyl methane dye
  - (d) Azo dyes

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

**(K2)**

6. What are the wavelength of Gamma rays? -----
7. Alizarin dye obtained from the root of madder plant is anthraquinone derivative. Its structure corresponds to what?
8. What is example of anthraquinone dye?
9. What are the two main group of pigments?
10. A dye imparts red colour on fabric. What colour of light was absorbed by the dye?

**SECTION – B**

**(5 X 3 = 15 MARKS)**

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

11. a) Define and Explain Chromophores.

**(OR)**

b) List out the classification of dyes.

12. a) Build the synthesis of Congo red.

**(OR)**

b) Infer azo coupling.

**ETHICAL PAPER**

13. a) Give the synthesis of Phenolphthalein  
(OR)  
b) Explain the synthesis of Malachite green
14. a) Examine Anthraquinone acid dyes  
(OR)  
b) Classify Fluorescent brighteners
15. a) Define textile fiber and its classification  
(OR)  
b) Propose the different types of rayon and their sources

**SECTION – C****(5 X 5 = 25 MARKS)****ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.(K4 /K5)**

16. a) Explain the following terms with neat diagram.  
i) Bathochromic shift, ii) Hypsochromic shift, iii) Hypochromic shift  
(OR)  
b) Discuss about quinonoid theory.
17. a) Propose the Synthesis and applications of azo dyes:  
(OR)  
b) Criticize the Nitroso dyes
18. a) Compile a note on Diphenyl methane dyes  
(OR)  
b) Describe the Synthesis and uses of Indigoid dyes
19. a) Construct about Disperse dyes  
(OR)  
b) Infer pigments.
20. a) Examine the manufacture of viscose rayon  
(OR)  
b) Give an account of Various methods of dyeing

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