

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2024
(Fourth Semester)

Branch – BOTANY

CHEMISTRY-II

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- Which of the following elements is a macronutrient?
(i) Cu (ii) Mn
(iii) Cl (iv) Mg
- Amino acid has
(i) Both amino group and carboxyl group (ii) Amino group only
(iii) Both amino group and keto group (iv) Carboxyl group only
- Which of the following is a natural dye?
(i) Crystal violet (ii) Aniline blue
(iii) Alizarin (iv) Phenolphthalein
- The specific conductance has the unit
(i) $\text{ohm}^{-1} \text{cm}^{-1}$ (ii) ohm cm
(iii) ohm cm^{-1} (iv) $\text{ohm}^{-1} \text{cm}$
- The oxygen combines with hemoglobin in the blood and form
(i) Deoxyhemoglobin (ii) Hemoglobin
(iii) Oxyhemoglobin (iv) Carbohemoglobin

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- a) Explain the fertilizers with its classification.
OR
b) Brief the classification of Insecticides.
- a) Discuss the preparation and uses of furan.
OR
b) Explain the preparation and properties of glycine.
- a) Compare the chromophore and auxochrome with suitable examples.
OR
b) Analyze the preparation of Indigo.

Cont...

9. a) State and Explain on faraday's law and Ohm's law.
OR
b) Discuss about Freundlich adsorption isotherm.
10. a) Explain the binding behavior of oxygen to myoglobin.
OR
b) State green chemistry and it give any three principles.

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

11. a) Evaluate the manufacture of urea.
OR
b) Justify the potassium fertilizers and nitration fixation.
12. a) Explain the proteins and discuss the primary, secondary and tertiary structure of proteins.
OR
b) Write the preparation detail of ethyl alcohol from molasses.
13. a) Explain in detail about classification of dyes based on chemical structure.
OR
b) Brief the pigments and write the structure of the following
i) Flavones ii) Pthlocyanines iii) Chlorophyll
14. a) Discuss about Kohlrash law and Oswald's law.
OR
b) Derive the Langmuir adsorption isotherm.
15. a) Write a detailed on non heme iron sulphur proteins.
OR
b) Discuss the toxicity of the following heavy metals i) Mercury ii) Chromium.

Z-Z-Z

END