

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 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)

1. Which of the following elements is a micronutrient?
(i) N (ii) Mn
(iii) Cu (iv) Zn
2. The simplest amino acid is _____
(i) Proline (ii) Methionine
(iii) Glycine (iv) Serine
3. Which group acts as a chromophore?
(i) – N=N- (ii) -OH
(iii) -OR (iv) –NH₂
4. Unit of equivalent conductance is
(i) ohm cm (g-eq) (ii) ohm⁻¹ cm² (g-eq)⁻¹
(iii) ohm cm² (g-eq)⁻¹ (iv) ohm⁻¹ cm (g-eq)⁻¹
5. Minamata disease was caused by consumption of fish containing
(i) Lead (ii) Zinc
(iii) Sulphur (iv) Mercury

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

6. a) Discuss the phosphate fertilizers.
OR
b) Write short note on Pesticides.
7. a) Write the preparation and uses of Pyridine.
OR
b) Discuss the preparation and properties of alanine.
8. a) Compare the chromophore and auxochrome with suitable examples.
OR
b) Draw the following structure of i) anthocyanin ii) carotinoids

Cont...

9. a) Explain the effect of dilution on conductance.

OR

b) Describe the types of adsorption.

10. a) Write short note on chemistry of hemoglobin.

OR

b) Explain the toxicity of heavy metals.

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

11. a) Explain in detail about manufacture of triple superphosphate.

OR

b) Discuss the natural plant Insecticides.

12. a) Explain the enzymes and discuss characteristics and mechanism of enzyme action.

OR

b) Discuss the following manufacture i) Spirit ii) Vinegar

13. a) Discuss about classification of dyes based on application.

OR

b) Explain the preparation of malachite green and alizarin.

14. a) Discuss the following i) Specific conductance ii) Molar conductance
iii) Equivalent conductance. (2+2+2)

OR

b) Derive the Langmuir adsorption isotherm.

15. a) Explain the non heme iron sulphur proteins.

OR

b) Discuss the toxicity of the following metals i) Cadmium ii) lead.

Z-Z-Z

END