

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2022
(Fourth Semester)

Branch – ZOOLOGY

CHEMISTRY- II

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 x 1 = 10)

1. Identify the Secondary nutrient
(i) Nitrogen (ii) Iron (iii) Magnesium (iv) Potassium
2. Mention the Coordination number of EDTA
(i) 5 (ii) 2 (iii) 3 (iv) 6
3. The hetero atom present in Pyridine is
(i) N (ii) O (iii) S (iv) K
4. Identify the globular protein
(i) Insulin (ii) Collagen (iii) Fibroin (iv) Myosin
5. Sulphur drugs are used as
(i) Analgesic (ii) Antimalarial (iii) Antibacterial (iv) Antipyretics
6. Find out the Vat dye
(i) Alizarin (ii) Indigo (iii) Malachite green (iv) Martin Yellow
7. What is the mathematical relation of Ohm's law?
(i) $I=V/R$ (ii) $V=I/R$ (iii) $R=I/V$ (iv) $V=IR$
8. Fluorescence emission occurs in
(i) $S_1 \rightarrow S_0$ (ii) $T_1 \rightarrow S_0$ (iii) $T_1 \rightarrow T_0$ (iv) $S_3 \rightarrow T_3$
9. Example for green solvent is
(i) Chloroform (ii) Hydrocarbon (iii) Acetone (iv) Water
10. Sodium ions present in body fluids _____
(i) Intracellular (ii) Extracellular (iii) Blood (iv) Hair.

SECTION - B (25 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 5 = 25)

11. a) Sketch the structure of EDTA and explain its applications.
(OR)
b) Outline the mode of action of Nitrogenous fertilizers.
12. a) Discuss the preparation and properties of Furan.
(OR)
b) Explain the mechanism of enzyme action.
13. a) What are dyes? Mention the requisites of a good dye.
(OR)
b) Explain the preparation and uses of Alizarin.

Cont...

14. a) State and Explain Faraday's law.

(OR)

b) Discuss about Photosensitization.

15. a) Discuss the pollution sources of Cadmium and Lead.

(OR)

b) Write a note on Fluoride toxicity.

SECTION -C (40 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 8 = 40)

16.a) Explain the biological role of Chlorophyll.

(OR)

b) Discuss about the following .

(i) Chelation and its industrial importance

(4)

(ii) Classification of Fertilizers

(4)

17. a) Summarize the Primary, Secondary and Tertiary structure of protein.

(OR)

b) Explain the manufacture of Spirit and Vinegar.

18. a) Discuss about chemotherapy and its importance.

(OR)

b) Explain in detail about the classification of dyes.

19. a) Explain the Lambert's Beer Law.

(OR)

b) Discuss Kohlrausch law and explain any two applications of it.

20. a) Discuss the role of trace elements in biological system.

(OR)

b) (i) List out the role of green chemistry in green synthesis.

(ii) Write note on non-heme iron sulphur proteins.

Z-Z-Z END