

PSG COLLEGE OF ARTS & SCIENCE .  
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2017  
(Fourth Semester)

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Branch- ZOOLOGY

**CHEMISTRY - II**

Time : Three Hours

Maximum-: 75 Marks

**SECTION-A (20 Marks)**

Answer ALL questions

ALL questions carry EQUAL marks (10 x 2 = 20)

- 1 What are fertilizers? How are they classified? -Give an example for each type.
- 2 Write the structure of EDTA. Give its uses.
- 3 What are heterocyclic compounds? Give any two examples.
- 4 Define enzyme. Mention its uses.
- 5 Define normality.
- 6 Define chromatography. How is it classified? .
- 7 State and explain Faradays first law of electrolysis.
- 8 What is mean by Quantum yield?
- 9 What are heavy metals? Give any four examples.
- 10 Write any two essential and trace elements present in biological systems.

**SECTION - B (25 Marks!)**

- Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 5 = 25).

- 11 a How are permono and perdi sulphuric acids prepared? Explain their important properties.  
OR  
b Discuss the biological role of haemoglobin and chlorophyll.
- 12 a Explain the preparation, properties and uses of furan.  
OR  
b i) How is ethylachol prepared from molasses? (3).  
ii) What are the characteristics of enzymes? (2)
- 13 a Discuss the purification of solids by sublimation method and liquids by fractional distillation method.  
OR  
b What is the principle of TLC? Mention any two applications of paper chromatography.
- 14 a State and explain all the laws of photochemistry. \*  
OR  
b What is meant by conductance, specific conductance, equivalent conductance and molar conductance? What is the effect of dilution on specific and equivalent conductances;

Cont

15 a Discuss the toxicity of mercury, lead, chromium and fluoride.

OR

b Write a short note on chemistry of myoglobin.

SECTION - C (30 Marks) >

Answer any THREE Questions

ALL Questions Carry EQUAL Marks (3 x 10 = 30)

16 a Give the postulates of Werner's theory of co-ordination compounds. (6)

b Write a short note on urea and phosphatic fertilizers. (4)

17 a What are amino acids? How are they classified? Explain the preparation, properties and uses of glycine. (6)

b Discuss the structure of proteins. (4)

18 a What is meant by molarity, molality, mole fraction, volume percentage and ppm?

19 a State and explain Ohm's law, Ostwald's dilution law and Kohlraich's law. (6)

b Define pH and buffer solution. Explain the importance of pH and buffer solution in the living system. (4)

20 • What is green chemistry?. Mention its various applications.

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