14ZOU11

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2019
(Third Semester)

Branch - **ZOOLOGY**

CHEMISTRY!

Time : Three Hours Maximum : 75 Marks

SECTION-A (20 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (10x2 = 20)

1 State Hund's rule.
2 Give the oxidation number of C in **CCl_4.**
3 What are terpenoids?
4 Name any two synthetic polymers.
5 What are the uses of sulpha drugs?
6 What is a dye? What are the requisites of a true dye?
7 What is a promoter? Can it alone act as catalyst?
8 List any three factors that can be varied to change the speed of a reaction.
9 Name two important sources of water pollution.
10 What is pollution?

SECTION - B (25 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5x5 = 25)

11 a State and explain Pauli's exclusion principle.

OR

b Sketch and explain the shapes of 'p' and 'd' orbitals.

12 a What are alkaloids? Write the preparation properties and uses of piperine.

OR

b How are the following prepared? Give its uses :
(i) Poly ethylene (ii) Terylene

13 a Write short notes on (i) Antipyretics (ii) Disinfectants

OR

b Explain the red shift and blue shift with examples.

14 a What are the pseudo - unimolecular reactions? Illustrate with an example.

OR

b Explain the following with examples :
(i) Auto catalysts (ii) Catalyst poisons

15 a What are the common pollutants of air? Discuss their effects on the environment.

OR

b Define water pollution and discuss the effects of water pollution.

SECTION - C 130 Marks)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks (3x10 = 30)

16 a Write the postulates of VSEPR theory. (5)
b Explain the following with examples : (5)
(i) Oxidising agent (ii) Reducing agent

17 a Write the preparation, properties and uses of benzene. (5)
b State and explain isoprene rule. (5)

18 a Write note on antibiotics. (5)
b How are the following dyes prepared? (5)
(i) Methyl orange (ii) Phenolphthalein

19 a What are consecutive and chain reactions? Give an example. (5)
b Derive Michaelis - Menten equation for enzyme catalysed reactions. (5)

20 a Write note on global warming. (5)
b What is soil pollution? What are their sources?