PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2018
(Third Semester)

Branch - **BOTANY**

CHEMISTRY -1

Time : Three Hours   Maximum : 75 Marks

SECTION-A (20 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks $(10 x 2 = 20)$

1   Define orbit and orbital.
2   State Hund's rule.
3   What is isoprene rule?
4   State Huckel's rule. Give an examplefor an aromatic compound.
5   What are antipyretics?Give an example.
6   What is chromophore? Give two examples.
7   Define order and molecularity.
8   What are consecutive reactions? Give an example.
9   Give any four sources of air pollution.
10 Give any two factors that affect soil pollution.

SECTION - B (25 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks $(5 x 5 = 25)$

11 a   Write a note on shapes of orbitals.
                                OR
    b   Describe the important postulates of VSEPR theory.

12 a   What are alkaloids? Give their classification. Write the properties and
          uses of piperine.
                                OR
    b   Give an account on natural polymers.

13 ai)   What are antibiotics? Give two examples and describe their uses.   (3)
    ii)   What are antiseptics? Give two examples and describe their uses.   (2)
                                OR
    b   Write short notes on indigo and alizarin. $(2½ + 2½)$

14 a   Derive the rate constant for first order reaction. What is the unit of first
          order rate constant?   (4+1)
                                OR
    b   Give an account on the mechanism of enzyme catalysis.   (5)

15 a   Write a note on (i) acid rain (ii) Global warming.   {2½ + 2½)
                                OR
    bi)   Define the terms DO, BOD and COD.   (3)
    ii)   What is eutrophication and write the effect of entrophication.   (1+1)

SECTION - C (30 Marks)
Answer any **THREE** Questions
ALL Questions Carry **EQUAL** Marks $(3 x 10 = 30)$

16a   Discuss the shapes of PCl_5 and IF_6.   (5)
   b   What are oxidising and reducing agents? Give two examples for each. (5)

17   Give an account on cellulose and its derivatives. Mention their uses. (8+2)

18   What do you mean by catalysis? Discuss the types and uses of catalysts. (2+4+4)