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SUBJECT CODE NO:- B-2142
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. F.Y (Sem-II) Examination OCT/NOV 2019
Chemistry Paper- V
Inorganic Chemistry

[Time: 1:30 Hours] **[Max.Marks:50]**

Please check whether you have got the right question paper.

N.B 1) Attempt all questions.
2) All questions carry equal marks.
3) Illustrate your answer with suitable labelled diagram.

Q.1 a) Discuss the structure and bonding in XeF_4. 10
b) Explain the formation of I_{F_7} molecule with the help of VSEPR theory. 10

OR

a) Explain molecular orbital diagram of N_2 molecule. (MoT) 10
b) Explain Sp^3d^2 hybridisation with suitable example. 10

Q.2 a) Write the properties of β and γ (Beta and Gamma) particles. 10
b) Explain in detail internal and external indicators. 10

OR

Write short notes on (any four) 20

1) Packing fraction
2) Structure of NH_3 molecule
3) Types of titration
4) Hydrogen bonding
5) Properties of α- particle
6) Chemistry of Xenon compounds

Q.3 Attempt the following:- 10

1) XeF_2 has ---------- geometry.
a) Trigonal bipyramidal b) linear c) Trigonal d) square planar

2) The atomic mass of Helium is
a) 1 b) 4 c) 6 d) 9

3) The structure of NH_3 molecule is
a) Tetrahedral b) Trigonal c) Pyramidal d) V-shaped

4) The bond angle of CH_4 molecule is
a) 105° b) 109° c) 107° d) 120°

5) The bond which is formed by sharing of electron is called
   a) Covalent bond b) Ionic bond c) Coordinate bond d) Hydrogen bond

6) $KMnO_4$ act as ---------- indicator.
   a) Self b) External c) Internal d) none of these

7) The Hydrogen has ---------- isotopes.
   a) One b) two c) three d) none of these

8) The shape of H_2O molecule is
   a) Triangular shape
   b) T-shaped
   c) V-shaped
   d) See-saw

9) Carbon dating techniques are used to analyse ---------- of the objects.
   a) Length b) breadth c) age d) colour

10) Phenolpthalien indicator is ---------- in acid and pink in base.
   a) Colourless b) yellow c) red d) blue