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SUBJECT CODE NO:- B-2008
FACULTY OF SCIENCE
B.Sc. F.Y (Sem-II) Examination March/April 2018
Chemistry Paper- V
Inorganic Chemistry

[Time: 1:30 Hours]

[Max.Marks:50]

N.B Please check whether you have got the right question paper.

N.B

- i) Attempt all questions
- ii) All questions carry equal marks.
- iii) Illustrate your answer with suitable labelled diagram.

Q.1 (a) Discuss the structure and bonding in XeF_2 . 10

OR

(b) Explain the formation of Ammonia molecule with the help of VSEPR theory. 10

Q.2 (a) What is Valence bond theory? How does it account for bonding in Hydrogen molecule? 10

OR

(b) What is free electron Concept of metallic bond? 10

Q.3 (a) Explain Isotope and Isobar with suitable example. 10

OR

(b) Explain:-
(a) Formation of N_2 molecule on the basis of molecular orbital theory. 05

(b) Carbon dating. 05

Q.4 Write short notes on any two of the following. 10

- (a) Calibration of Pipette
- (b) Binding energy
- (c) Oxidizing agent
- (d) Limitations of VBT

Q.5 Attempt the following:-

10

- The outermost electronic Configuration of noble gases are _____.
 - ns^2np^6
 - ns^2
 - ns^2np^5
 - ns^2np^1
- XeF_4 has _____ lone pair.
 - One
 - Two
 - Zero
 - Three
- Bond angle of HOH in water molecule is _____.
 - 109.5°
 - 104.5°
 - 90°
 - 107.5°
- Geometry of SF_6 _____.
 - Tetrahedral
 - Octahedral
 - Trigonal Planar
 - Pentagonal bipyramid
- MOT was developed by _____.
 - Hund & Huckel
 - Hund & Mulliken
 - Hund & Pauling
 - Mulliken & Pauling
- O_2 is _____.
 - Diamagnetic
 - Paramagnetic
 - Ferromagnetic
 - Anti-Ferromagnetic
- Bonding molecular orbital is at _____.
 - Higher energy level
 - Lower energy level
 - At the same energy level
 - None of these

8. Phenolphthalein appears _____ colour in alkaline medium.

- (a) Yellow
- (b) Colourless
- (c) Blue
- (d) Pink

9. $KMnO_4$ is an _____ agent.

- (a) Oxidising
- (b) Reducing
- (c) Chelating
- (d) Precipitating

10. EDTA is _____ ligand.

- (a) Monodentate
- (b) Hexadentate
- (c) Bidentate
- (d) None of these