Avinashilingam Institute for Home Science and Higher Education for Women,

(Deemed to be University) Coimbatore – 641 013

Bachelor's Degree Examinations – November 2018

I Semester

Class: I UG **Time: 3 hrs**
Major: Zoology **Marks: 100**

18BZOI02-DSE-I-Chemistry Theory for Zoology

PART-A **10x1=10**

Circle the correct answer

1. The molality is defined as the number of moles of solute present in
   a) one litre of the solvent b) one litre of the solution
   c) one kilogram of the solvent d) one kilogram of the solution

2. To protect eyes from splashing droplets of corrosive chemicals and glass particles wearing ___ in lab is a safety measure.
   a) power spectacles b) sun glasses
   c) Cooling spectacles d) goggles

3. Complete transfer of one or more electrons from an element to another is
   a) Chemical bonding b) Ionic bonding c) covalent bonding d) co-ordinate bonding

4. Type of bond present between water molecules is _____ .
   a) H-bond b) Metallic c) co-ordinate d) Intra

5. Compounds having same sequence of covalent bonds, but differ in relative position of the atoms or groups in space are called _____.
   a) Stereo isomers b) Metamers c) Functional isomers d) structural isomers

6. How many optical isomers are possible for lactic acid?
   a) 2 b) 4 c) 6 d) 8

7. Protein gives __color in Xanthoproteic test
   a) Yellow b) blue c) Pink d) orange

8. An example of disacharride is
   a) Glucose b) Sucrose c) Fructose d) Maltose

9. The organic compound impurities insoluble in solvent are removed by _____ method
   a) crystallization b) sublimation c) chromatography d) Soxhletting

10. Example of secondary metabolites is
    a) carbohydrates b) Alkaloids c)fats d)protein

PART- B 5x6=30

Answer the following

Answer should not exceed 200 words or one page

11.a) Discuss first aid when to be adopted liquid bromine spills on your skin.

(or)

11. b) Explain the principle of redox titrations.

12. a) Sketch the shape of s,p and d orbitals.

(or)

12. b) Write a note on intermolecular H- bonding with an example.

13 a) Explain optical isomerism in Lactic acid.

(or)

13 b) Explain any two elements of symmetry.

14 a) What is denaturation of protein? Explain.

(or)

14 b) Give any two tests to identify carbohydrate?

15 a) Write a note on soxhlet extraction.

(or)

15 b) What is crystallization? Explain the process.

PART-C 5x12=60

Answer the following

Answer should not exceed 700 words or four pages

16 a) Explain the various concentration expressions to determine the strength of a solution.

(or)

16 b) Briefly discuss the methods of handling flammable, volatile, corrosive chemicals and anti- oxidants.

17 a) Differentiate ionic and covalent bonds with suitable examples.

(or)

17 b) Discuss the structure and H- bonding in Water

18 a) Illustrate the terms "geometrical and optical isomerism" with suitable examples.

(or)

18 b) (i) Describe the chemistry of Carbon.

(ii) Explain the terms asymmetric centre and Chirality.

19 a) Discuss the primary and secondary structures of proteins.

(or)

19 b) Establish the open chain structure of Fructose.

20 a) Discuss a simple method for extraction of a compound with a solvent.

(or)

20 b) How do you employ color tests for identifying secondary metabolites?

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