



KW-1203

Seat No. _____

B. Sc. (Sem. II) Examination

April/May - 2013

Biotechnology : Paper - CBT I-II

(Molecules of Life)

Time : 3 Hours]

[Total Marks : 70

1 MCQ write any ten : 10

(i) What is the base of the Lewis acid base theory?

- (a) On ionization
- (b) On proton transfer
- (c) On properties of acid-base
- (d) On the acceptance or donation of electron pair

(ii) Who define pH scale and in which year ?

- (a) Sorensen in 1909
- (b) Arrhenius in 1890
- (c) Robert Boyel in 1880
- (d) None of these

(iii) What is use to measure the accurate value of pH ?

- (a) Indicator
- (b) pH meter
- (c) pH paper
- (d) Litmus paper

- (iv) If pH of a solution is 1.3 then what will be its pOH ?
- (a) 1.3
 - (b) 8.7
 - (c) 12.7
 - (d) 13.7
- (v) Two ring are there in
- (a) Guanine
 - (b) thymine
 - (c) Uracil
 - (d) Cytosine
- (vi) Insulin is _____
- (a) Polysaccharide
 - (b) Protein
 - (c) Oligosaccharide
 - (d) Lipid
- (vii) The set of nitrogen bases on DNA is :
- (a) ATUG
 - (b) UTGC
 - (c) ATGC
 - (d) AUCC
- (viii) Pectin can be traced in _____
- (a) Liver cells
 - (b) Blood protein
 - (c) Plant cell wall
 - (d) Milk protein
- (ix) Which of the following is Disaccharide ?
- (a) Sucrose
 - (b) Cellulose
 - (c) Chitin
 - (d) Glucose

- (x) Which of the following is not a polymer ?
- (a) Protein
 - (b) Nucleotide
 - (c) Starch
 - (d) Cellulose
- (xi) Sweetest sugar is _____
- (a) Ribose
 - (b) Fructose
 - (c) Mannose
 - (d) Ribulose

2 Do as directed :

10

- (i) Define pH and Buffer
- (ii) Define Carbohydrate and write down with general formula of carbohydrate
- (iii) Define Protein and peptide
- (iv) Define Lipid and write two name of compound lipid.
- (v) Define Reducing sugar and write the two name of Reducing Sugar.
- (vi) Write down the sulphur containing Amino acid.
- (vii) Give the General formula of Amino acid and give five name of Amino acid.
- (viii) Which primary bond is present in protein and DNA ?
- (ix) Give the name of primary Bond present in lipid.
- (x) Draw the structure of water with specification.
- (xi) Write down the various type of RNA.
- (xii) Write down the two name of homopolysaccharide.

3 Write short notes : (any four)

32

- (i) Write a note on biological buffer.
- (ii) Write a note on Water structure.
- (iii) Write a note on vitamins
- (iv) Write the importance of lipid and carbohydrates
- (v) Explain the structure of DNA.
- (vi) Write the basic components of life and its importance.
- (vii) Write a note on Fisher and Haworth projection.

4 Write in detailed : (any two)

18

- (i) Write a note on RNA types.
 - (ii) Explain pH scale.
 - (iii) Write a note on Amino acid Classification.
 - (iv) Write a note on nitrogen base.
-