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ABC-2971 Seat No._____

B. Sc. (Sem. II) Examination

March / April – 2019

Biotechnology : CC-201

(CBT-I-II : Molecules of Life) *(Core Course)*

Time : **3** Hours] [Total Marks : **70**

1 Attempted all questions : **10×1=15**

(1.1) Non essential amino acid

(A) Histidine (B) Lysine

(C) Serine (D) All

(1.2) The buffer capacity is equal to

(A) $\Delta n / \Delta pH$ (C) $pH / \Delta n$

(B) $\pm 1\ pKa$ (D) $\pm 2\ pKa$

(1.3) Glucose residues are linked by β 1 & *a*4 glycoside bonds

(A) Amylose (C) Starch

(B) Cellulose (D) B+C

(1.4) Sugar of RNA contains carbon

(A) C6 (C) C5

(B) C12 (D) C3

(1.5) Buffer solution

(A) Always pH-7

(B) Maintain pH

(C) Depend on H+ ions

(D) None of these

(1.6) Which ratio is constant for DNA

(A) $A+G/T+C$ (C) $A+U/G+C$

(B) $A+C/U+G$ (D) $A+T/G+C$

(1.7-10) Answering the followings :

(A) DNA Full form

(B) Example of essential amino acids

(C) Examples of polysaccharide

(D) Types of RNA

(1.11-1.15) Match the following :

(A)	Agar	(1)	Amino acid
(B)	Collagen	(2)	Fatty acid
(C)	Serine	(3)	Mucosaccharide
(D)	Glycerol	(4)	Hormone
(E)	Insulin	(5)	Protein

2 Answer any **five** questions : **5×5=25**

(2.1) Define chemical bonds and their types

(2.2) Explain classification of carbohydrates with examples

(2.3) Give definition of pH and its scale

(2.4) Define amino acids and classification

(2.5) Describe chemistry of water

(2.6) Define Atoms, Elements, Molecules & compounds

(2.7) Write shorts note on "Bio molecules"

3 Answer any **three** question : **10×3=30**

(3.1) Explain carbohydrate, structure and functions with examples

(3.2) Draw double helix structure of DNA and explain it

(3.3) Describe vitamins and deficiencies

(3.4) Define protein and classification