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Seat No : _____

No. of Printed Pages : 2

SARDAR PATEL UNIVERSITY
M.Sc. (semester-II) External Examination
PS02ECHE22-Introduction to Biochemistry
Saturday, 23th November, 2019

Time: 10:00 a.m. to 1:00 p.m.

Total marks : 70

Note: Right hand figure indicate full marks

Q.1 Select the correct answer from the choices given below for each of the following questions: [08]

- (1) Pernicious anaemia is caused by deficiency of
(a) Vitamin B₁₂ (b) Vitamin D
(c) Vitamin B (d) Folic acid
- (2) Which disease is occur by the deficiency of essential fatty acid?
(a) Cancer (b) Phrynoderma
(c) Aging (d) Atherosclerosis
- (3) The bonds forming the backbone of protein structure is
(a) Disulfide bonds (b) Hydrogen bonds
(c) Ionic bonds (d) Peptide bonds
- (4) The phenomenon of disorganization of native protein structure is called.....
(a) Coagulation (b) Flocculation
(c) Denaturation (d) All of above
- (5) Which sugar is known as a non-reducing sugar?
(a) Sucrose (b) Maltose
(c) Lactose (d) Glucose
- (6) The first enzyme to be isolated in a pure crystalline form was.....
(a) Invertase (b) Zymase
(c) Urease (d) Diastase
- (7) Which base is not present in the structure of DNA?
(a) Thymine (b) Adenine
(c) Guanine (d) Uracil
- (8) Which type of RNA is also called as a soluble RNA?
(a) Transfer RNA (b) Messenger RNA
(c) Ribosomal RNA (d) Heterogenous nuclear RNA

Q.2 Answer ANY SEVEN from the following: [14]

- (1) What do you mean by vitamers? Write vitamers of vitamin-A.
- (2) Justify: Vitamin D is a hormone.
- (3) Write a note on essential fatty acids.
- (4) What do you mean by denaturation of protein? Write the agents of denaturation.
- (5) Write a short note on functions of proteins.
- (6) Define the following with examples:
(i) epimer (ii) enantiomers
- (7) What are induction and repression? Explain by suitable example of each.
- (8) Explain optical specificity with suitable examples.
- (9) Write a note on "Denaturation of DNA strands".

[P.T.O.]

- Q.3 (A) Give an account on absorption, transport and storage of vitamin A. [06]
(B) What is the significance of testing purity of fats and oils? Describe any three tests to determine the purity of fats and oil.. [06]

OR

- (B) Describe the structure and functions of cholesterol. [06]

- Q.4 (A) List the various levels of protein structure and add a note on primary structure of protein. [06]
(B) Classify amino acids based on their polarity and nutritional value. [06]

OR

- (B) Write brief account on the following: [06]
(i) Fibrous proteins.
(ii) Globular proteins.

- Q.5 (A) Define isomers. Draw the possible isomers of glucose. [06]
(B) Describe the structure and functions of two biochemically important disaccharides. [06]

OR

- (B) Write a note on Hyaluronic acid and Heparine. [06]

- Q.6 (A) Explain the enzyme inhibition. [06]
(B) Give diagrammatic overview of Watson and Crick's double helical structure of DNA. [06]

OR

- (B) Write a detail note on types of RNA. [06]

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