Roll No. | | | | | | | | | | | | |  Total No. of Pages : 03

Total No. of Questions : 13

B.Pharma (2017 & Onwards) (Sem.-2)

# BIOCHEMISTRY

Subject Code : BP-203T

M.Code : 74969

Time : 3 Hrs. Max. Marks : 75

**INSTRUCTIONS TO CANDIDATES :**

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains THREE questions carrying TEN marks each and student has to attempt any TWO questions.**
3. **SECTION-C contains NINE questions carrying FIVE marks each and student has to attempt any SEVEN questions.**

## SECTION-A

**1. Multiple choice questions :**

a) Formation of cyclic structure of α-D glucose is an example of:

(a) Nucleophillic addition (b) Hemi-acetal formation

(c) Acetal formation (d) Both (a) and (b)

b) Amino acids in proteins are usually in :

(a) L form (b) D form

(c) Both L & D form (d) Either L or D

c) …… enzyme is required for oxidative decarboxylation of pyruvic acid.

(a) PDH (b) Pyruvate kinase

(c) Enolase (d) GADPH

d) Following hormone is not involved in the regulation of blood glucose :

(a) Insulin (b) Epinephrine

(c) Glucagon (d) Oxytocin

e) Formation of ATP coupled with de phosphorylation of phosphoenolpyruvate is the example of :

(a) Substratelevel phosphorylation

(b) Oxidative phosphorylation

(c) Substrate level dephosphorylation

(d) Oxidative dephosphorylation

f) Bile acid is :

(a) Cholesterol derivative (b) Carbohydrate derivative

(c) Amino acid derivative (d) Nucleotide derivative

g) First digit of EC number of succinate thiokinase is :

(a) 1 (b) 4

(c) 3 (d) 6

h) The DNA strand which does not participate in transcription is referred to as :

(a) Non-coding strand (b) Sense strand

(c) Coding strand (d) All of these

i) ……. pathway recycle the free bases and nucleoside released from nucleic acid breakdown.

(a) Salvage (b) De novo

(c) Both (a) & (b) (d) None of these

j) Following is not the cause of atherosclerosis :

(a) High BP (b) High cholesterol

(c) Diabetes (d) Acidosis

## SECTION-B

2. Describe the reactions of citric acid cycle and comment on its anapleoratic nature.

3. Describe the reaction of β-oxidation. Comment on energy conservation in this catabolic pathway.

4. Describe the various steps of protein synthesis. Comment on inhibitors of this anabolic pathway.

## SECTION-C

5. Classify polysaccharides with one structural example of each class. Comment on the structure of starch.

6. Name the four level of protein structure. Briefly explain secondary structure of protein.

7. Discuss the structure of ATP and its biological significance.

8. Compare glycolysis and gluconeogenesis.

9. Explain the mechanism of electron transport chain.

10. Describe the reactions of ketogenesis.

11. Explain the semi conservative model of DNA replication.

12. Describe the synthesis and biological significance of dopamine.

13. What is Lineweaver-Burk plot of enzyme kinetics? What are its advantages over Michaelis-Menten plot?



**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**