



# UNIVERSITY OF THE PUNJAB

Fifth Semester – 2019

Examination: B.S. 4 Years Program

Roll No. in Fig. ....

Roll No. in Words. ....

**PAPER: Biochemistry-II**  
**Course Code: ZOOL-303 Part-I (Compulsory)**

**MAX. TIME: 15 Min.**  
**MAX. MARKS: 10**

.....  
Signature of Supdt.:

**Attempt this Paper on this Question Sheet only.**

**Please encircle the correct option. Division of marks is given in front of each question.**

**This Paper will be collected back after expiry of time limit mentioned above.**

**Q.1. Encircle the right answer, cutting and overwriting is not allowed. (1x10=10)**

- i The action of lipase in the intestine is greatly enhanced by \_\_\_\_\_ of lipids.  
A. diffusion                      B. storage  
C. micelle                         D. fractionation
- ii The free energy change for a reaction depends upon the \_\_\_\_\_ of initial reactants and final products  
A. pH                                B. concentration  
C. Both A and B                 D. None of these
- iii Conversion of glucose into fructose is  
A. deamination                 B. epimerization  
C. isomerization                D. carboxylation
- iv Ammonia produced in humans is disposed off in the form of  
A. urea                              B. ammonia  
C. uric acid                        D. all of these
- v Carbamoyl phosphate synthetase-I present  
A. cytoplasm                      B. ribosomes  
C. mitochondria                 D. None of these
- vi The ammonia transport from muscle to liver for urea formation through  
A. Aspartate                      B. Alanine glucose cycle  
C. Both A and B                 D. None
- vii Which one participates in reactions that produce a carbon-carbon double bond  
A. NAD<sup>+</sup>                            B. FAD<sup>+</sup>  
C. NADP                            D. none
- viii Lipoprotein carries both electrons and acyl molecules because of its property of  
A. oxidation                        B. reduction  
C. Both A and B                 D. None of these
- ix Maximum energy produced by  
A. Fats                                B. Carbohydrates  
C. Protein                            D. Nucleic acid
- x The stable ring formation in D-Glucose involves  
A. C-1 and C-4                    B. C-1 and C-2  
C. C-1 and C-5                    D. C-2 and C-5



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Fifth Semester – 2019

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Roll No. ....

**PAPER: Biochemistry-II**

**Course Code: ZOOL-303 Part – II**

**MAX. TIME: 2 Hrs. 45 Min.**

**MAX. MARKS: 50**

**ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED**

- Q.2 Give short answer of the following** **2x10=20**
- i. Write the function of transketolase and transaldolase.
  - ii. How ammonia is transported by alanine?
  - iii. Write the name of hydroxyl and sulfur containing amino acids.
  - iv. What you know about phosphate ester and glycosidic bond?
  - v. Draw the structure of ribose and deoxyribose.
  - vi. What are the functions of lipids?
  - vii. Why the phosphorylated intermediates are important?
  - viii. How gluconeogenesis is different from glycolysis?
  - ix. What are the fates of pyruvate under anaerobic conditions?
  - x. Differentiate between transamination and deamination?

- Q.3 Long questions.** **3x10=30**
- I Write a detail note citric acid cycle?**
  - II Discuss pentose phosphate pathway in detail.**
  - III Give a comprehensive note on urea cycle in detail.**