



PAPER: Bio Chemistry

MAX. TIME: 15 Min.

Course Code: CHEM-311 Part-I (Compulsory)

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)

1. In glucose the orientation of the —H and —OH groups around the carbon atom 5 adjacent to the terminal primary alcohol carbon determines

- (A) D or L series (B) Dextro or levorotatory
(C) α and β anomers (D) Epimers

2. Invert sugar is

- (A) Lactose (B) Sucrose
(C) Hydrolytic products of sucrose (D) Fructose

3. The monosaccharide units are linked by 1 \rightarrow 4 glycosidic linkage in

- (A) Maltose (B) Sucrose
(C) Cellulose (D) Cellobiose

4. Which of the following is a non-reducing sugar?

- (A) Isomaltose (B) Maltose
(C) Lactose (D) Trehalose

5. Which of the following is a reducing sugar?

- (A) Sucrose (B) Trehalose
(C) Isomaltose (D) Agar

6. A disaccharide formed by 1,1-glycosidic linkage between their monosaccharide units is

- (A) Lactose (B) Maltose
(C) Trehalose (D) Sucrose

7. The number of isomers of glucose is

- (A) 2 (B) 4
(C) 8 (D) 16

8. Adenine is

- (A) 6-Amino purine (B) 2-Amino-6-oxypurine
(C) 2-Oxy-4-aminopyrimidine (D) 2, 4-Dioxypyrimidine

9. Transfer RNAs are classified on the basis of the number of base pairs in

- (A) Acceptor arm (B) Anticodon arm
(C) D arm (D) Extra arm

10. The fact that DNA bears the genetic information of an organism implies that

- (A) Base composition should be identical from species to species
(B) DNA base composition should change with age
(C) DNA from different tissues in the same organism should usually have the same base composition
(D) DNA base composition is altered with nutritional state of an organism



UNIVERSITY OF THE PUNJAB

Fifth Semester – 2019

Examination: B.S. 4 Years Program

Roll No.

PAPER: Bio Chemistry

Course Code: CHEM-311 Part – II

MAX. TIME: 2 Hrs. 45 Min.

MAX. MARKS: 50

ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

Q.2. Questions with short answers.

(10 x 2 = 20)

- i. Draw D and L isomers of Glyceraldehyde.
- ii. What do you mean by a reducing disaccharide? Give an example with structure.
- iii. What do you mean by a non-reducing disaccharide? Give an example with structure.
- iv. Give two examples of storage homopolysaccharides.
- v. Explain the term invert sugar.
- vi. Give two examples of buffering agents.
- vii. What do mean by Dextran.
- viii. Give functions of Mitochondria.
- ix. Differentiate between Proteoglycans and Glycoproteins.
- x. Explain briefly the cell wall composition.

Q.3. Questions with brief answers.

(3 x 10 = 30)

- i. Describe the cyclic structure of monosaccharides.
- ii. Explain optical isomerism and mutarotation in glucose.
- iii. How isolation of cellular components occurs? Explain briefly.