Seat No: _____ **Enrollment No: _____**

PARUL UNIVERSITY

FACULTY OF ENGINEERING & TECHNOLOGY

B.Tech. Summer 2018 - 19 Examination

Semester: 4 **Date: 13/05/2019**
Subject Code: 03111251 **Time: 02:00pm to 04:30pm**
Subject Name: Biochemistry **Total Marks: 60**

Instructions:
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 **Objective Type Questions** - (Fill in the blanks, one word answer, MCQ-not more than Five in case of MCQ) (All are compulsory) (Each of one mark) **(15)**

1. Urea synthesis occurs in:
a) Liver b) Stomach c) Kidney d) Muscle
2. Two NADH molecules can give _____ ATP molecules:
a) 3 b) 6 c) 4 d) 2
3. Glucose is a ____ :
(a) Monosaccharide (b) Disaccharide (c) Polysaccharide (d) Both b and c
4. When an enzyme is used, what will happen to the reaction's activation energy:
a) Increase b) Decrease c) Remain constant d) Both increase and decrease

5. What will be the complementary DNA strand of --- 3' ACTAGCCTAAG 5'
a) 5' TGATCGGATTC 3'
b) 5' TGACCAGATTC 3'
c) 3' TGATCGGATTC 5'
d) 3' TGAACCTGTTC 5'
6. Three fatty acids combine with one glycerol to form a _____
7. _____ is the simplest amino acid
8. The nucleotide not present in DNA is _____
9. DNA replication is _____ in nature
10. There are _____ types of RNA
11. There are _____genetic codons
12. One example of Macrominerals is _____
13. Hormone released from ovary is _____
14. Hormone released from thyroid gland is _____
15. Zwittor ions are _____

Q.2 Answer the following questions. (Attempt any three) **(15)**

A) Explain fatty acid oxidation in detail.
B) State the importance of radioactive isotopes in biochemistry.
C) Name the various enzymes involved in digestion and absorption. Also state their functions.
D) Explain the Citric acid cycle in detail.

Q.3 A) Draw and Explain the structure of DNA. **(07)**
B) Define: i) Enantiomers ii) Optical activity iii) Essential fatty acids iv)Peptide bond **(08)**

OR

B) Describe cancer, its causes and preventive measures **(08)**

Q.4 A) Explain the process of digestion of carbohydrates. **(07)**

OR

A) Discuss Urea cycle and its significance. **(07)**
B) Explain glycolysis in detail. **(08)**