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

PARUL UNIVERSITY

FACULTY OF APPLIED SCIENCE

M.Sc. Winter 2019-2020 Examination

Semester: 1 **Date: 29/11/2019**
Subject Code: 11209115 **Time: 10.30 am To 1.00 pm.**
Subject Name: Advanced Nutritional 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. A) Essay type/ Brief note (4x2) (Each of 04 marks) **(08)**
(a) Draw Gluconeogenesis Cycle
(b) Explain Gluconeogenesis Cycle

Q.1. B) Answer the following questions (Any two)
(a) Short note/ Brief note (2x2)/ Schematically label the figures (2x2) (Each of 02 marks) **(04)**
1. State Lambert's Law
2. State Beer's Law

(b) Short note High Pressure Liquid Chromatography **(04)**
(c) Short note Gas Liquid Chromatography **(04)**

Q.2. A) Answer the following questions.
(a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks) **(04)**
1. Enlist the names of 5 co factors involved in Oxidative Decarboxylation
2. Enlist the names of 3 enzymes involved in Oxidative Decarboxylation

(b) Draw Kreb Cycle **(04)**

Q.2. B) Answer the following questions (Any two)
(a) Short note/ Multiple choice questions. (Each of 01 marks) **(03)**
1. Define Hormones
2. Define agonist
3. Define receptor

(b) Short note on Importance of Kreb Cycle **(03)**
(c) Short note on Importance of Glycolysis Cycle **(03)**

Q.3. A) Essay type/ Brief note (4x2) (Each of 04 marks) **(08)**
(a) Write in detail about Oxidative Phase Of HMP Shunt
(b) Write in detail about Non- Oxidative Phase Of HMP Shunt

Q.3. B) Answer the following questions (Any two)
(a) Short note/ Brief note (2x2)/ Schematically label the figures (2x2) (Each of 02 marks) **(04)**
1. Draw a neat and well labeled diagram for atomic absorption spectrophotometer
2. Write in short about Amino acid induced Gluconeogenesis

(b) Short note on role of cAMP as second messenger **(04)**
(c) Short note on Calmodulin **(04)**

Q.4. A) Answer the following questions.
(a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks) **(04)**
1. Write in short about intracellular messengers
2. Write a short note on Fatty acid Synthase Complex

(b) Short note on cholesterol and its synthesis **(04)**

Q.4. B) Answer the following questions (Any two)
(a) Short note/ Multiple choice questions. (Each of 01 marks) **(03)**
1. Human Body can store upto _____g of Glycogen in liver and muscles.
2. Glycolysis is inhibited by _____hormone
3. _____vitamin is required for biosynthesis of fatty acids

(b) Short note Ion Exchange Chromatography **(03)**
(c) Short note on Colorimeter **(03)**