

PARUL UNIVERSITY
FACULTY OF APPLIED SCIENCE
M.Sc./IMSc Summer 2018-19 Examination

Semester: 2/8

Subject Code: 11203153

Subject Name: Biochemical Pathways and Metabolism

Date: 03/04/2019

Time: 10:30am to 1:00pm

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)**
Discuss TCA cycle: function and regulation.
- Q.1. B) Answer the following questions (Any two)**
- (a) Discuss Metabolism of fructose. (04)
 - (b) Discuss about any two in born errors of carbohydrate metabolism. (04)
 - (c) Short note on gluconeogenesis. (04)
- Q.2. A) Answer the following questions.**
- (a) Discuss In born errors of amino acid metabolism. (04)
 - (b) Short note on protein turn over. (04)
- Q.2. B) Answer the following questions (Any two)**
- (a) Short note/ Multiple choice questions. (Each of 01 marks) (03)
 1. Define: Essential amino acid
 2. What is purine and pyrimidine
 3. Define: Non Essential amino acid
 - (b) Inhibitors of Nucleic acid biosynthesis (03)
 - (c) Biosynthesis pyrimidines (03)
- Q.3. A) Essay type/ Brief note (4x2) (Each of 04 marks) (08)**
Metabolic breakdown of individual amino acid
- Q.3. B) Answer the following questions (Any two)**
- (a) Oxidation of fatty acids (04)
 - (b) Formation and utilization of ketone bodies (04)
 - (c) Metabolism of phospholipids (04)
- Q.4. A) Answer the following questions.**
- (a) Short note: Role of liver and adipose tissue in lipid metabolism (04)
 - (b) Short note: formation of prostaglandins (04)
- Q.4. B) Answer the following questions (Any two)**
- (a) Short note/ Multiple choice questions. (Each of 01 marks) (03)
 1. Write down the precursor of deoxy ribonucleotides synthesis
 2. Name the Inhibitors of nucleic acid biosynthesis
 3. What is heme protein?
 - (b) Short note: In born errors of nucleic acid metabolism (03)
 - (c) Short note: In born errors of porphyrin metabolism. (03)