

PARUL UNIVERSITY
FACULTY OF APPLIED SCIENCE
M.Sc., Winter 2017-18 Examination

Semester: 2**Subject Code: 11203153****Subject Name: Biochemical pathways and Metabolism****Date: 05/01/2018****Time: 10:30 am to 1:00 pm****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)** Explain the glycolysis metabolism and it's regulation in a cell. **(08)**
- Q.1. B) Answer the following questions (Any two)**
- (a) Short note (Each of 02 marks) **(04)**
1. Give the protein turnover rate.
 2. Define fatty acids.
- (b) Explain the role of inhibitors in nucleic acid biosynthesis. **(04)**
- (c) Describe the role of liver in lipid metabolism. **(04)**
- Q.2. A) Answer the following questions.**
- (a) Do as directed. **(04)**
1. What is Kreb's bicycle
 2. What is phenyl ketonuria.
- (b) How gluconeogenesis regulation will occurs in cell. **(04)**
- Q.2. B) Answer the following questions (Any two)**
- (a) Short note. **(03)**
1. Fate of cholesterol molecule.
 2. What are Chylomicrons.
 3. Key intermediate in the Synthesis of Tryptophan, Phenylalanine, and Tyrosine.
- (b) Make a note on ubiquitine. **(03)**
- (c) Write a short note on prostaglandins. **(03)**
- Q.3. A) Essay type/ Brief note.** **(08)**
- (a) What are phospholipids and sphingolipids how they are metabolised.
- (b) Explain the Denovo purine biosynthesis.
- Q.3. B) Answer the following questions (Any two)**
- (a) Short note. **(04)**
1. What is the precursor for Deoxyribonucleotide.
 2. What is the intermediate in cholesterol biosynthesis.
- (b) Describe the regulation of urea cycle. **(04)**
- (c) Write a note on Salvage pathway. **(04)**
- Q.4. A) Answer the following questions.**
- (a) Short note. **(04)**
1. Make a short note on regulation of TCA cycle.
 2. Define acidosis and ketosis.
- (b) Explain the Ketone bodies formation and utilization. **(04)**
- Q.4. B) Answer the following questions (Any two)**
- (a) Do as directed. **(03)**
1. What is the end product of the Purine degradation.
 2. Write the full form of VLDL, HDL.
 3. Write the full form of TCA, HMP.
- (b) Give the inhibitors for nucleic acids biosynthesis. **(03)**
- (c) Write the significance of HMP shunt. **(03)**