

**PARUL UNIVERSITY**  
**FACULTY OF APPLIED SCIENCE**  
**B.Sc Supplementary, Winter 2017-18 Examination**

**Semester: 2****Date: 08/01/2018****Subject Code: 11103151****Time: 10.30 am to 1.00 pm****Subject Name: Biochemistry- II****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) Write a note on Pentose phosphate pathway.  
(b) Explain the different stages of fatty acid oxidation of saturated and even chain fatty acid.
- Q.1. B) Answer the following questions (Any two) (04)**  
(a) Short note/ Brief note (2x2)/ Schematically label the figures (2x2)(Each of 02 marks) (04)  
1. What is the importance of 2, 3 BPG in RBC?  
2. Explain: why pellagra is known as 3D disease.  
(b) Short note: Importance of Triacylglyceride. (04)  
(c) Explain the term: Exergonic, Endergonic, endothermic and exothermic. (04)
- Q.2. A) Answer the following questions. (04)**  
(a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks) (04)  
1. What is vitamin? Explain giving one example.  
2. Explain: Cofactors with giving two examples.  
(b) Give the classification of enzyme with examples. (04)
- Q.2. B) Answer the following questions (Any two) (03)**  
(a) Short note/ Multiple choice questions. (Each of 01 marks) (03)  
1. How many ATP are produced during Glycolysis (aerobic condition)?  
2. What is the active form of vitamin D known as?  
3. Give one example of PUFA and MUFA.  
(b) Justify: ATP plays a central role in metabolism. (03)  
(c) Give the difference between fat soluble vitamins and Water-soluble vitamins. (03)
- Q.3. A) Essay type/ Brief note (4x2) (Each of 04 marks) (08)**  
(a) Give a brief note on Glycogen storage diseases.  
(b) Short note: Urea cycle
- Q.3. B) Answer the following questions (Any two) (04)**  
(a) Short note/ Brief note (2x2)/ Schematically label the figures (2x2)(Each of 02 marks) (04)  
1. Why glutamine is known as storehouse of ammonia?  
2. Write about Refsum's disease.  
(b) Short note : Glycolysis (04)  
(c) Explain the biosynthesis of amino acid from precursor  $\alpha$ -ketoglutarate (04)
- Q.4. A) Answer the following questions. (04)**  
(a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks) (04)  
1. Name the important compounds formed from glycine.  
2. Write a difference between Carbonyl phosphate synthase I and Carbonyl phosphate synthase II  
(b) Explain: Transamination. (with reaction) (04)
- Q.4. B) Answer the following questions (Any two) (03)**  
(a) Short note/ Multiple choice questions. (Each of 01 marks) (03)  
1. Which is the coenzyme for transamination reaction?  
2. Which amino acid is oxidatively deaminated in liver?  
3. Name defective enzyme in homocystinuria.  
(b) Explain: Integration between TCA cycle and Urea Cycle. (only with figure) (03)  
(c) List the different mechanism for disposal of ammonia. (03)