

**PARUL UNIVERSITY**  
**FACULTY OF PHARMACY**  
**B.Pharm. Winter 2019-20 Examination**

**Semester: 6****Subject Code: 08101352****Subject Name: Pharmaceutical Chemistry-VIII (Biochemistry-II)****Date: 09/12/2019****Time: 10:00 am to 1:00 pm****Total Marks: 75****Instructions:**

1. Figures to the right indicate full marks.
2. Make suitable assumptions wherever necessary.

**Q.1 Essay type Questions. (Any 2 out of 3) (10 marks each) (20)**

1. Describe the hexose monophosphate shunt and add a note on its significance.
2. Give an account of fatty acid oxidation and explain carnitine palmitoyl transferase deficiency.
3. Define oxidative phosphorylation. Discuss Chemiosmotic hypothesis and inhibitor of ETC in details.

**Q.2 Short Essay type Questions. (Any 7 out of 9) (5 marks each) (35)**

1. What is glycolysis? Discuss the reactions of glycolysis in details.
2. Explain biochemical role of riboflavin and thiamine.
3. Enlist the techniques use in biochemistry and explain any one in details.
4. Explain vitamin as coenzyme and its significance.
5. Describe the replication of DNA.
6. Describe polymerase chain reaction along with its application.
7. What is genetic code? Describe the characteristics of genetic code.
8. Describe biosynthesis of ketone bodies and their utilizations.
9. Describe lactose operon.

**Q.3 Answer in short. (2 marks each) (20)**

1. Write a short note on mutations.
2. Write a note on inhibitors of DNA replications
3. Explain role of TPP in carbohydrate metabolism.
4. Write a note on cori cycle.
5. Describe energetics of TCA cycle.
6. Explain function of cholesterol.
7. Write a short note on fatty acid synthase complex.
8. Justify the sentence: Vitamin D is a hormone.
9. Write a note on vitamin K in carboxylation.
10. Write a note on extraction and purification of protein and nucleic acid.