

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph. - SEMESTER-III • EXAMINATION – SUMMER-2021

Subject Code:BP303TP
Subject Name: Biochemistry
Time: 02:30PM to 05:30PM

Date: 31/08/2021

Total Marks: 80

Instructions:

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1	(a) Explain β - oxidation of fatty acids with its energetic.	06
	(b) Write a note on citric acid cycle explaining its amphibolic nature	05
	(c) Write a note on enzymes involved in biological oxidation.	05
Q.2	(a) Define and classify carbohydrates. Discuss biochemical importance of monosaccharides in detail.	06
	(b) Describe role of hormones in blood glucose homeostasis.	05
	(c) Explain electron transport chain with its mechanism	05
Q.3	(a) Discuss ketogenesis with reactions. Explain significance of ketogenesis. Add note on demerits caused due to overproduction of ketone bodies.	06
	(b) Write a note on damage and repair of DNA.	05
	(c) Discuss genetic code with its characteristics.	05
Q.4	(a) Discuss in detail isolation and purification of nucleic acid	06
	(b) Define enzyme inhibition. Explain reversible and irreversible enzyme inhibition.	05
	(c) Explain metabolism of sulphur containing amino acids: Cystein	05
Q.5	(a) Discuss trans amination of amino acids.	06
	(b) Explain with suitable examples about different enzyme and coenzyme.	05
	(c) Discuss ampholytic properties of aminoacids.	05
Q. 6	(a) What is Translation? Discuss different steps involved in it.	06
	(b) Explain in detail about following diseases. (any one) 1. Jaundice, 2. Hyperbilirubinemia	05
	(c) Explain Transcription	05
Q.7	(a) What is oxidative phosphorylation? Explain P:O ratio, sites of oxidative phosphorylation in ETC and energetic of oxidative phosphorylation	06
	(b) Explain in detail biological significance of cholesterol in to bile acids.	05
	(c) What is free energy? Explain relationship between free energy, enthalpy and entropy.	05
