

GUJARAT TECHNOLOGICAL UNIVERSITY**B.Pharm • SEMESTER – IV • EXAMINATION – SUMMER-2016****Subject Code:2240003****Date: 07/05/2016****Subject Name: Pharmaceutical Chemistry V (Biochemistry – II)****Time: 10:30 AM to 1:30 PM****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) Describe in brief DNA replication.	06
	(b) Write a note on protein synthesis.	05
	(c) Discuss about applications of chromatography in biochemistry.	05
Q.2	(a) Write a note on polymerase chain reaction.	06
	(b) Enlist factors responsible for DNA damage and explain in brief DNA repair mechanisms.	05
	(c) Discuss about biosynthesis of RNA.	05
Q.3	(a) Write a note on regulation of gene expression.	06
	(b) What is bioenergetics? Describe central role of ATP in metabolism.	05
	(c) Write a note on genetic code.	05
Q.4	(a) Describe in detail urea cycle and associated metabolic disorders.	06
	(b) Write a note on oxidative phosphorylation.	05
	(c) Describe in brief extraction and purification of protein and nucleic acid.	05
Q.5	(a) What are proteins? Describe in detail chemical bonds involved in protein structure.	06
	(b) Discuss in brief on post translational modifications.	05
	(c) Write on metabolism of sulphur containing amino acids.	05
Q.6	(a) Describe in detail structure of DNA.	06
	(b) Explain the role of enzymes and coenzymes in biological oxidation-reduction reactions.	05
	(c) Write a note on respiratory chain.	05
Q.7	(a) Write a note on porphyrin biosynthesis.	06
	(b) Describe in brief purine nucleotide interconversion.	05
	(c) Give brief account on genetic engineering.	05
