## **GUJARAT TECHNOLOGICAL UNIVERSITY B. PHARM – SEMESTER IV • EXAMINATION – WINTER • 2015** Subject code: 2240003 Date: 12-01-2016 Subject Name: Pharmaceutical Chemistry - V (Biochemistry-II) Time: 02:30 pm - 05:30 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** What is Protein? Classify it with example. **(a)** 06 Discuss in detail about Post Transcription Modification. 05 **(b)** Write a Short Note on denaturation of Protein. (c) 05 Explain in brief metabolism of sulphur containing amino acids. **O.2** 06 (a) Write a short note on chromatography. 05 **(b)** What is Amino Acid? Classify it by giving example. (c) 05 Q.3 **(a)** Define oxidative phosphorylation. Discuss inhibitors of oxidative **06** phosphorylation. Write a note on ETC. 05 **(b)** (c) Write in detail about enzymes involved in biological oxidation. 05 Write about reaction and energetic of Krebs-Henseleit cycle. **O.4** 06 (a) Describe in detail transamination and deamination reactions for amino acids **(b)** 05 metabolism. Discuss the pyrimidine biosynthesis with its regulation. 05 (c) Q.5 **(a)** Describe de novo synthesis of purine nucleus and conversion of IMP to AMP 06 and GMP. What is the importance of bile pigments in human body? How it is formed and 05 **(b)** what are the implications of its metabolic disorders. Write about the reactions involved in the heme biosynthesis. 05 (c) What is replication? Why DNA replication is called semi-conservative. Q.6 06 (a) Explain the role of DNA polymerase, DNA ligase and DNA helicase in the replication of prokaryotes. Give detail account on Operon Concept. **(b)** 05 Discuss in detail about electrophoresis. (c) 05 **0.7** Write a note on gene expression in eukaryotes. (a) 06 Write note on DNA repair mechanisms. **(b)** 05 Discuss in detail isolation and purification of nucleic acids. (c) 05

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