

GUJARAT TECHNOLOGICAL UNIVERSITY

B.Pharm-SEMESTER-VI- (OLD SYLLABUS) EXAMINATION – SUMMER-2015

Subject Code: 260003

Date: 05/05/2015

Subject Name: Pharmaceutical Chemistry-VII (Biochemistry)

Time: 10:30 a.m. to 1:30 p.m.

Total Marks: 80

Instructions:

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

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| Q.1 | (a) Describe in detail about beta oxidation of fatty acids. | 06 |
| | (b) Explain about ketogenesis pathway and write its significance. | 05 |
| | (c) What is Operon? Write a note on Inducible Operon. | 05 |
| Q.2 | (a) Discuss about purine biosynthesis pathway and disorders of purine metabolism. | 06 |
| | (b) Give examples of sulphur containing aminoacids & enlist metabolic pathway of any one. | 05 |
| | (c) Write a note on Chromatography. | 05 |
| Q.3 | (a) Draw schematic diagram of urea cycle with structural formula and explain the regulation & disorder of this cycle. | 06 |
| | (b) What is bile pigment? How it is formed? Write its significance and metabolic disorders. | 05 |
| | (c) Write a note on Genetic Code. | 05 |
| Q.4 | (a) What is gene? Give details on DNA replication & signify the different enzymes involved in it. | 06 |
| | (b) What is transgenic organism? Write a note on Genetic engineering with applications. | 05 |
| | (c) Write the name of the specialized products produced from amino acids & enlist the biosynthetic pathway of Porphyrin. | 05 |
| Q.5 | (a) What is oxidative phosphorylation? Write in details about respiratory chain. | 06 |
| | (b) Write notes on enzymes involved in biological oxidation. | 05 |
| | (c) Write about physiological functions and deficiency disorders of following any two minerals.
i) Calcium. ii) Iodine. iii) Potassium. | 05 |
| Q. 6 | (a) Write in brief about protein synthesis & how it will be inhibited. | 06 |
| | (b) Give in details how nucleic acid is isolated and purified. | 05 |
| | (c) Explain the following terms.
i) Zellweger syndrome. ii) Centrifugation.
iii) HDL & LDL. iv) Transamination. v) Nucleotide. | 05 |
| Q.7 | (a) What is PCR? Write short note on PCR & its significance. | 06 |
| | (b) Give in details about electrophoresis techniques. | 05 |
| | (c) What are the possible causes for DNA damage & how it is repaired? | 05 |
