

**GUJARAT TECHNOLOGICAL UNIVERSITY****B. PHARM. - SEMESTER – VI • EXAMINATION – WINTER 2012****Subject code: 260003****Date: 31/12/2012****Subject Name: Pharmaceutical Chemistry – VII (Biochemistry)****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.

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|-------------|---|-----------|
| <b>Q.1</b>  | (a) Write in brief about various oxidation reaction occur during fatty acid synthesis or metabolism.                                    | <b>06</b> |
|             | (b) Discuss in detail about electrophoresis.  | <b>05</b> |
|             | (c) Give detail account on operon concept.  | <b>05</b> |
| <b>Q.2</b>  | (a) Discuss about respiratory chain with its role as energetic. What are the respiratory chain inhibitors?                              | <b>06</b> |
|             | (b) Explain with suitable example about different enzymes and coenzymes involved in biological oxidation and reduction reactions.       | <b>05</b> |
|             | (c) Write a note on oxidative phosphorylation.  | <b>05</b> |
| <b>Q.3</b>  | (a) How nitrogen is balanced in human body? Write in brief about metabolism of ammonia and nitrogen containing monomers.                | <b>06</b> |
|             | (b) To which specialized products aminoacids get converted? How?  | <b>05</b> |
|             | (c) Explain urea cycle with its metabolic disorders.  | <b>05</b> |
| <b>Q.4</b>  | (a) Enlist sulphur containing amino acids with their importance. Give metabolic pathway of any one.                                     | <b>06</b> |
|             | (b) What are the importances of bile pigments in human body? How it is formed and what are the implications of its metabolic disorders. | <b>05</b> |
|             | (c) Write a note on biosynthesis and utilization of ketone bodies.  | <b>05</b> |
| <b>Q.5</b>  | (a) Give detail account on DNA replication in prokaryotes with role of different enzymes involved in it.                                | <b>06</b> |
|             | (b) Write a note on isolation and purification of nucleic acid.   | <b>05</b> |
|             | (c) Write in detail about different chromatographic techniques with their importance in biochemistry.                                   | <b>05</b> |
| <b>Q. 6</b> | (a) Give detail account on organization of genetic material in human genome. How it can be altered or rearranged?                       | <b>06</b> |
|             | (b) Write a note on components and inhibitors of protein biosynthesis.  | <b>05</b> |
|             | (c) Write a note on polymerase chain reaction.  | <b>05</b> |
| <b>Q. 7</b> | (a) Discuss in detail about purine biosynthesis. Explain purine nucleotide inter conversion.  | <b>06</b> |
|             | (b) Write a note on importance of water and water balance in human body.  | <b>05</b> |
|             | (c) Give detail account on biochemical importance and absorption of calcium. Discuss about its metabolic disorders.                     | <b>05</b> |

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