

GUJARAT TECHNOLOGICAL UNIVERSITY**BE – SEMESTER V • EXAMINATION – WINTER - 2012****Subject code: 150405****Date: 23-01-2013****Subject Name: The Science of Life****Time: 02:30 pm to 05:00 pm****Total Marks: 70****Instructions:**

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

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|------------|---|-----------|
| Q.1 | (a) Explain mechanism of translation in prokaryotes. | 10 |
| | (b) Give classification of lipids. | 04 |
| Q.2 | (a) Explain mechanism of eukaryotic replication in detail with a neat diagram. | 07 |
| | (b) Compare plant and animal cells | 07 |
| | OR | |
| | (b) Compare prokaryotic and eukaryotic cells. | 07 |
| Q.3 | (a) Write a short note on Replication in Prokaryotes. | 10 |
| | (b) Explain various properties of genetic code. | 04 |
| | OR | |
| Q.3 | (a) Write a short note on transcription in prokaryotes. | 10 |
| | (b) Discuss Watson and Crick model of DNA. | 04 |
| Q.4 | (a) Give classification of amino acids. | 07 |
| | (b) Write a short note on disaccharides and polysaccharides. | 07 |
| | OR | |
| Q.4 | (a) Explain classification of monosaccharides. | 07 |
| | (b) Write a short note on structure of t-RNA. | 07 |
| Q.5 | (a) Write a short note on haptens. | 06 |
| | (b) Differentiate different classes of immunoglobulins. | 06 |
| | (c) Write a short note on adjuvants | 02 |
| | OR | |
| Q.5 | (a) Explain the concept of graft rejection. | 06 |
| | (b) Differentiate different granulolytic cells. | 06 |
| | (c) Write a short note on epitopes. | 02 |
