

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- Vth SEMESTER-EXAMINATION – MAY/JUNE - 2012****Subject code: 150405****Date: 07/06/2012****Subject Name: The Science of Life****Time: 02:30 pm – 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.

- Q.1** (a) Explain classification of monosaccharide. **07**
(b) Prove DNA as a genetic material in prokaryotes. **07**
- Q.2** (a) Explain the term antibody. Write in detail structure of it. **07**
(b) Write a short note on processing of m-RNA **07**
OR
(b) Explain Clover leaf model of t-RNA. **07**
- Q.3** (a) Write a short note on replication in prokaryotes. **10**
(b) Enlist properties of genetic code. **04**
OR
- Q.3** (a) Write a short note on transcription in eukaryotes. **10**
(b) Explain charging of t-RNA with amino acid. **04**
- Q.4** (a) Discuss in detail about evolution of life **07**
(b) Write a detail note on allergy and asthma. **07**
OR
- Q.4** (a) Define cell. Enlist various cellular organelles. Explain any one in detail. **07**
(b) Explain the term antigen. Differentiate antigenicity and immunogenicity. **07**
- Q.5** (a) Describe in detail about adjuvants. **07**
(b) Discuss in detail how blood cells are synthesized? **07**
OR
- Q.5** (a) What are the major differences between prokaryotic and eukaryotic cellular system. **07**
(b) Define following terms with suitable explanation: **07**
 - Innate immunity
 - Adaptive immunity
 - Antigenicity
