

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-III • EXAMINATION – WINTER 2013****Subject Code: 130301****Date: 30-11-2013****Subject Name: Life Sciences-1****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) Define the following terms: **07**
1. Posterior
 2. Rhythmicity property
 3. Agglutination
 4. Effective refractory time period
 5. EMG
 6. Yellow spot
 7. Tidal volume
- (b) Explain the structure of cell in detail with neat diagram. **07**
- Q.2** (a) Explain generation of blood flow through heart with necessary diagram. **07**
- (b) Enlist types of tissues and explain epithelial tissues in detail with diagram. **07**
- OR**
- (b) Explain connective tissues in detail. **07**
- Q.3** (a) Describe the composition of blood and enlist the functions of blood. **07**
- (b) short note on: ECG **07**
- OR**
- Q.3** (a) Write a short note on RBC and discuss its properties. **07**
- (b) Explain electrical conduction system of heart with necessary diagram. **07**
- Q.4** (a) Describe the whole respiratory tract with neat diagram. **07**
- (b) Explain the cell membrane physiology and action potential. **07**
- OR**
- Q.4** (a) Explain the structure of nasal cavity in detail with clean diagram. **07**
- (b) Explain transport of substances across cell membrane with diagram. **07**
- Q.5** (a) Explain the structure of Eye with diagram. **07**
- (b) Classify the joints and explain the types of synovial joint. **07**
- OR**
- Q.5** (a) Explain the structure of ear with diagram. **07**
- (b) Explain the structure of long bone with diagram. **07**
