Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY
(A Constituent Institute of – Manipal University)
Manipal – 576 104

III SEMESTER B.Tech. (BME) DEGREE END SEM. EXAMINATIONS, NOV/ DEC- 2015.

SUBJECT: ANATOMY AND PHYSIOLOGY(BME 2105)
Saturday, 5th December 2015, 9 am to 12 noon

TIME: 3 HOURS **MAX. MARKS: 100**

Instructions to Candidates:

1. **Answer all FIVE questions from part A and all FIVE questions from part B. Use separate answer books.**
2. **Draw labeled diagram wherever necessary**

PART-A ANATOMY (Max.Marks: 50)

1) Discuss the structure of a typical synovial joint with the help of a neat labeled diagram. Name the different types of synovial joints with one example for each. **5+5**

2) Describe the right lung under the following headings **5+5**

(i) External features (ii) Mediastinal surface relations.

3) Describe the anatomy of the following **6+4**

(i) Uterus. (ii) Gallbladder

4) Draw a neat labeled diagram of the supero-lateral surface of the cerebrum showing the sulci and gyri. Add a note on the functional areas present in that surface **6+4**

5) Describe the anatomy of the following **5+5**

(i) Right atrium of the heart. (ii) Stomach.

PART-B PHYSIOLOGY (Max. Marks: 50)

1a)	Draw a neat labeled diagram of monophasic action potential and mention the ionic causes.	**4+3**
1b)	Enumerate the differences between isotonic and isometric contraction.	**3**
2a)	What are the different forms CO_2 is transported in the blood. Explain chloride shift or Haldane effect.	**1+3+3**
2b)	Explain briefly mechanism of inspiration and expiration	**3**
3a)	Discuss the common defects of the image forming mechanisms in the eye. Explain the basis of correction of each.	**4+3**
3b)	What are the functions of middle ear.	**3**
4a)	Enumerate the functions of Basal Ganglia and what are the features of Parkinsonism.	**4+3**
4b)	Discuss on physiological classification of sensory receptors.	**3**
5a)	Draw a labeled diagram of nephron. Give the functions of each part of it.	**7**
5b)	Draw a labeled diagram of ECG as recorded by limb lead II.	**3**