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MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

A Constituent Institution of Manipal University

III SEMESTER B.Tech. (BME) DEGREE MAKE UP EXAMINATIONS, DEC/JAN 2016-17

SUBJECT: ANATOMY AND PHYSIOLOGY(BME 2105)

Wednesday, 4th January 2017, 9 am to 12 noon

TIME: 3 HOURS

MAX. MARKS: 100

Instructions to Candidates:

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

PART-A ANATOMY (Max.Marks: 50)

- 1) Enumerate the parts of the female reproductive system. Describe the anatomy of the uterus** **2+8**
- 2) Write a note on the following** **5+5**
 - Typical synovial joint
 - Skeletal muscle
- 3) Describe the anatomy of the following.** **5+5**
 - Spinal cord
 - Cerebellum
- 4) Describe the left lung under the following headings.** **5+5**
 - External features
 - Mediastinal surface
- 5) Describe the anatomy of the following** **5+5**
 - Liver
 - Parotid gland

PART-B PHYSIOLOGY (Max. Marks: 50)

- 1a)** What is Excitation Contraction Coupling? Explain with a diagram. **4+3**
- 1b)** Write briefly on 'Sarcomere' **3**
- 2a)** What are the forms in which CO₂ is transported in the blood. Draw CO₂ dissociation curve and mention factors affecting it. **2+5**
- 2b)** Draw a diagram of alveolar capillary membrane **3**
- 3a)** Explain in detail the properties of cardiac muscle. **7**
- 3b)** Draw a neat labelled diagram of limb lead II ECG. Mention their causes. **3**
- 4a)** What is the normal body temperature and how is it regulated? **1+6**
- 4b)** Write briefly on "Cystometrogram". **3**
- 5a)** Draw a neat labelled diagram of the cross section of spinal cord at L2 showing two descending tracts and mention what they carry. **4+3**
- 5b)** Mention functions of middle ear. **3**