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



III SEMESTER B.Tech. (BME) DEGREE MAKE UP EXAMINATIONS, DEC/JAN- 2015-16

SUBJECT: ANATOMY AND PHYSIOLOGY(BME 207)
(REVISED CREDIT SYSTEM)

Thursday, 7th January 2016, 9 am to 12 noon

TIME: 3 HOURS

MAX. MARKS: 100

Instructions to Candidates:

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

PART-A ANATOMY (Max.Marks: 50)

- 1a) Name all the long bones of the limbs. Add a note on the blood supply of long bones** **5**
- 1b) Describe the Structure of a neuron with a labeled diagram.** **5**
- 2) Write a short note on** **5+5**
 (i) Skin. (ii) Autonomic nervous system.
- 3) Describe the anatomy of** **5+5**
 (i) Para-nasal air sinuses. (ii) Right Atrium
- 4) Write a short note on** **5+5**
 (i) Stomach. (ii) Uterus.
- 5) Write a short note on** **5+5**
 (i) Parotid gland. (ii) Urinary bladder.
- 6) Write a short note on** **5+5**
 (i) Testis. (ii) Thyroid gland.

PART-B PHYSIOLOGY (Max. Marks: 50)

- 1a)** Draw a neat labeled diagram of monophasic action potential. Mention the events in causation of action potential. **4+3**
- 1b)** Classify nerve fibers based on diameter and myelination. **3**
- 2a)** What are the forms in which O₂ is transported in blood. Draw a neat labeled diagram of O₂- Hb dissociation curve. List the factors which shifts for curve to the left. **1+3+3**
- 2b)** Draw a neat diagram of respiratory membrane. **3**
- 3a)** Draw a diagram of cross section of the eye . Name the photo receptors and explain their function. **7**
- 3b)** What are the receptors of audition. Draw a diagram of the same. **3**
- 4a)** Trace the pathway of lateral corticospinal tract. **7**
- 4b)** What are the functions of basal ganglia. **3**
- 5a)** Define micturition. With the help of a diagram explain micturition reflex. **2+5**
- 5b)** List the functions of kidney. **3**
- 6a)** Draw a diagram of limb lead II Electrocardiogram . Give its cause each of the waves. Mention any four conditions when ECG is altered. **3+2+2**
- 6b)** List the differences between I and II heart sounds **3**