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## MANIPAL INSTITUTE OF TECHNOLOGY

(A constituent unit of MAHE, Manipal 576104)

**1<sup>st</sup> SEMESTER M.Tech. (BME) DEGREE END SEM. EXAMINATIONS, NOVEMBER 2019.**

**SUBJECT: HUMAN ANATOMY AND PHYSIOLOGY (BME 5153)  
(REVISED CREDIT SYSTEM)**

**Friday, 15<sup>th</sup> November 2019: 2 PM to 5 PM**

**TIME: 3 HOURS**

**MAX. MARKS: 50**

### 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. HUMAN ANATOMY. (Max. Marks: 25)

- 1) (i) Name the parts of gastrointestinal tract. 2+3  
(ii) Write a note on stomach.
- 2) (i) Enumerate the parts of female reproductive system. 2+3  
(ii) Write a note on uterus.
- 3) Name all the cranial nerves with one function each. 5
- 4) Write a note on typical synovial joint. 5
- 5) Write a note on left kidney. 5

### PART-B. HUMAN PHYSIOLOGY (Max. Marks: 25)

- 1) Describe the process of "Excitation Contraction Coupling" 5
- 2) Enumerate the functions of Platelets and discuss any one in Detail. 5
- 3) What is "surfactant"? What are its functions? 5
- 4) Define cardiac output. What are its determinants? Discuss any one. 5
- 5) What are contents of the middle ear? Mention their functions? 5