

Reg. No.																			
----------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



MANIPAL INSTITUTE OF TECHNOLOGY
(Manipal University)
Manipal – 576 104



V SEMESTER B.Tech. (BME) DEGREE MAKE UP EXAMINATIONS, DEC/JAN 2015-16
SUBJECT: BASIC CLINICAL SCIENCES II (BME 301)
(REVISED CREDIT SYSTEM)
Tuesday, 29th December, 2015 : 2.00 to 5.00 pm

TIME: 3 HOURS

MAX. MARKS: 100

Instructions to Candidates:

1. Answer any **FOUR** full questions from **PART- A**, any **THREE** full questions from part **B** and any **THREE** full questions from **PART- C**. Use separate answer books for **PART-A**, **PART-B** and **PART-C**.
2. Draw labeled diagram wherever necessary.

PART- A. OPHTHALMOLOGY (Max. Marks 40)

- 1) What is LASER? Discuss three ways laser act in the eye with an example of the laser used and the disease it is used for. **1+9**
- 2) Write short note on **5+5**
(i) Direct Ophthalmoscope. (ii) Contact lens.
- 3) Describe the process of Vitrectomy. Enumerate five uses of Vitrectomy in Ophthalmology. **5+5**
- 4) What is perimetry? Name any two types of perimeters. Name two conditions where they are used. **6+2+2**
- 5) Write short notes on **5+5**
(i) Optical Coherence Tomography (OCT).
(ii) Fundus Camera.

PART- B. ORTHOPAEDICS (Max. Marks 30)

- 1) Discuss the properties of implant materials used in fracture fixation. **10**
- 2) Discuss the anatomy of joints with respect to arthritis. Discuss the prosthesis in joint replacement. **10**
- 3) Discuss traction and muscle strengthening exercises in Orthopaedics. **10**
- 4) Discuss Arthroscopy and its circuit. **10**

PART-C. SPEECH AND HEARING (Max. Marks 30)

- 1) Differentiate cochlear implant and Hearing aid. Explain digital signal processing in hearing aids. **10**

- 2) Discuss the working principle and instrumentation of brainstem evoked response audiometry (BERA). **10**

- 3) Discuss the role of biomedical engineers in the field of speech and hearing **10**

- 4) Explain **5+5**
 - (i) AAC
 - (ii) EPD's