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MANIPAL INSTITUTE OF TECHNOLOGY

(A constituent unit of MAHE, Manipal 576104)

V SEMESTER B.Tech. (BME) DEGREE END SEM EXAMINATIONS, NOV/DEC, 2018

SUBJECT: BASIC CLINICAL SCIENCES II (BME 3101)

(REVISED CREDIT SYSTEM)

Monday, 19th November, 2018 : 2.00 PM to 5.00 PM

TIME: 3 HOURS

MAX. MARKS: 100

Instructions to Candidates:

1. Answer ALL questions from PART- A, PART-B and PART- C. Use separate answer books for PART-A, PART-B and PART-C.
2. Draw neat labeled diagram wherever necessary.

PART- A. OPHTHALMOLOGY (Max. Marks 40)

- 1) Write short notes on
(i) Tonometry (ii) Ophthalmoscopy 5+5
- 2) Write short notes on :
(i) Optical coherence tomography (OCT) (ii) B-scan 5+5
- 3) Discuss Fundus fluorescein angiography (FFA). Enumerate *four* conditions where it is used. 6+4
- 4) What is phacoemulsification? Mention its advantages over other cataract surgery techniques. Describe the parts of the machine used for phacoemulsification and name *two* types of pumps used in the machine. 2+3+3+2

PART- B. ORTHOPAEDICS (Max. Marks 30)

- 1) Discuss gross and microscopic structure of bone. 10
- 2) Define orthosis and prosthesis. Describe the materials used for prosthesis. 10
- 3) Write short notes on
(i) Bone cement (ii) Ultrasound 5+5

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

- 1) Explain with block diagram the pure tone audiometer and tympanometry (immittance). Write in brief the importance of hearing assessment. 10
- 2) Explain cochlear implant with diagram. 10
- 3) Explain the principle and various assistive listening devices used in classroom to enhance the listening skills. 10