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



IV SEMESTER B.Tech. (BME) MAKE-UP EXAMINATIONS, JUNE/JULY 2016.

SUBJECT: BASIC CLINICAL SCIENCES-I (BME 206)
(REVISED CREDIT SYSTEM)

Thursday, July 7, 2016, 2 to 5 pm

TIME: 3 HOURS

MAX. MARKS: 100

Instructions to Candidates:

- 1. Answer any 3 full questions from PART-A, any 4 full questions from PART-B and any 3 full questions from PART-C**
- 2. Use separate answer books for PART-A, Part-B and PART-C**
- 3. Draw labeled diagram wherever necessary**

PART-A CARDIOLOGY (Max. Marks 30)

- Q1) Write a note on basic parameters and time cycle of single chamber pacemakers. 10
- Q2) (1) Define resolution. Explain various types of resolution. 5+5
(ii) Write a note on IABP.
- Q3) (i) Define bundle branch block. Explain ECG findings of Left bundle branch block. 5+5
(ii) Define MET, RPP, MPHR, THR in TMT.
- Q4) Explain types of stents and catheters used in cardiac cath lab. 10

PART-B. ANAESTHESIOLOGY (Max. Marks 40)

- Q1) Describe the safety features built in a modern Anaesthesia machine to prevent delivery Of hypoxic gas mixture. 10
- Q2) Explain Hagen- Poiseuille's equation. Explain the working principle of Constant pressure Variable orifice Flow meter. 10
- Q3) Enumerate different types of intravenous infusion devices. Describe in detail any one of them. 10
- Q4) Explain the concept of Damping Coefficient with respect to pressure transducer. 10
- Q5) Describe briefly, the working principle of a Capnograph. What are the clinical uses of Capnography? 10

PART-C. ENT. (Max. Marks 30)

- Q1) Name the parts of middle ear cleft with a neat labeled diagram. Write a note on impedance matching mechanism. 4+6
- Q2) What is cochlear implant? List out the components of cochlear implant and give indications for its use. 3+3+4
- Q3) (i) Explain the principle of LASER. 3+2+2+3
(ii) Give the uses of CO₂ LASER in ENT.
(iii) What are the precautions to be taken while using LASER?
(iv) List the merits and demerits of cryosurgery.
- Q4) Enumerate the different methods of post laryngectomy speech rehabilitation. Write a note on one of them. 5+5