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MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

A Constituent Institution of Manipal University

IV SEM B.Tech. (BME) DEGREE END-SEMESTER EXAMINATIONS, APRIL 2018.

SUBJECT: BASIC CLINICAL SCIENCES-I (BME 2204)
(REVISED CREDIT SYSTEM)

Tuesday, 17th April 2018, 2 to 5 pm

TIME: 3 HOURS

MAX. MARKS: 100

Instructions to Candidates:

- 1. Answer All questions of PART-A, PART-B and 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) Explain cardiac cycle in detail with the event timings. 10
- Q2) (i) Enumerate the ECG criteria's of second degree AV block. 5+5
- (ii) Define transducer and discuss the types in detail.
- Q3) (i) Write a note on Intra-Aortic Balloon Pump and its functioning. 5+5
- (ii) Write a note on atrial enlargement.

PART-B. ANAESTHESIOLOGY (Max. Marks 40)

- Q1) Explain the working principle of TENS (Transcutaneous nerve stimulator)? What are the parameters to be set in this machine? 10
- Q2) What is the meaning of patient control Analgesia (PCA)? How does this help to control pain? What are the parameters to be set in this device? 10
- Q3) Classify vaporizers and briefly outline the working principle of Tec 6 vaporizer. 4+6
- Q4) What are the different principles used for end tidal carbon dioxide monitoring? Explain with diagram. 10

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

- Q1) What is middle ear cleft. Draw a neat labelled diagram of the middle ear. 10
- Q2) Enumerate the parts of the larynx? Write a note on physiology of larynx. 4+6
- Q3) Describe the parts of a hearing aid and its function? Enumerate the different types of hearing aid used. 6+4