

Exam Date & Time: 14-May-2022 (10:00 AM - 01:00 PM)



# MANIPAL ACADEMY OF HIGHER EDUCATION

## SIXTH SEMESTER B.TECH END SEMESTER EXAMINATIONS, MAY 2022 BASIC CLINICAL SCIENCES II [BME 3251]

**Marks: 50**

**Duration: 180 mins.**

**A**

**Answer all the questions.**

Instructions to Candidates:

**Missing data may be suitably assumed**

- 1) Name few hypoxia prevention safety devices in the anesthesia workstation. (3)  
A)  
B) Describe oxygen concentrators in brief. (3)  
C) Name the patterns of stimulation with peripheral nerve stimulator. Describe in brief TOF ratio. (4)
- 2) Describe in brief the components of invasive blood pressure monitoring system. (3)  
A)  
B) What is OCTA? Mention two differences between FFA and OCTA? (3)  
C) What is LASER? Enumerate three laser tissue interactions with an example each for its clinical application. (4)
- 3) What is tonometry? Enumerate the different types of tonometer with one example for each? (3)  
A)  
B) List different types of contact lenses with one use of each. (3)  
C) Explain the instrumentation of pure tone audiometry. (4)
- 4) Differentiate hearing aid and cochlear implant. (3)

- A)
- B) Explain the role of biomedical engineers in the field of speech and hearing. (5)
- C) Enumerate stages of sleep. (2)
- 5) Enumerate cranial nerves and the functions they sub-serve. (3)
- A)
- B) With neat labelled diagram describe neuromuscular junction. (3)
- C) Write a note on RNS. (4)

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