

Exam Date & Time: 25-Jul-2022 (09:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SIXTH SEMESTER B.TECH MAKE-UP EXAMINATIONS, JULY 2022

BASIC CLINICAL SCIENCES II [BME 3251]

Marks: 50

Duration: 180 mins.

A

Answer all the questions.

Instructions to Candidates:

Answer ALL questions

Missing data may be suitably assumed

- 1) Describe in brief mechanical flowmeters used in the anesthesia workstation. (3)
 - A)
 - B) How does the thermocouple thermometer work? Explain. (3)
 - C) Describe phonophoresis in brief. (4)
- 2) Describe in brief HME. (3)
 - A)
 - B) Explain the principle of FFA. (3)
 - C) Enumerate any two uses of contact lenses. What are the advantages of contact lenses over spectacle lenses? (4)
- 3) What are the components of a slit lamp? What are the two types of slit lamp? (3)
 - A)
 - B) List any three differences between direct and indirect ophthalmoscope. (3)
 - C) Explain the assistive devices related to communication disorder. (4)

- 4) How do you think you can improve the cochlear implant from biomedical perspective? Explain. (3)
- A)
- B) Explain the rationale of biomedical engineers learning speech and hearing subjects. (5)
- C) Name different lobes of Brain. (2)
- 5) Write a note on VEP and its application. (3)
- A)
- B) Define Epilepsy and write a note on different waveforms in EEG. (3)
- C) Write a short note on Carpal Tunnel Syndrome including role of electrophysiology in diagnosis. (4)

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