

Question Paper

Exam Date & Time: 25-May-2023 (02:30 PM - 05:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SIXTH SEMESTER B.TECH END SEMESTER EXAMINATIONS, MAY-JUNE 2023

BASIC CLINICAL SCIENCES II [BME 3251]

Marks: 50

Duration: 180 mins.

Answer all the questions.

Draw neat diagrams wherever necessary

- 1) Explain stages of sleep. (3)
 - A)
 - B) Write a note on RNS with reference to physiology of neuromuscular junction. (3)
 - C) Write a note on facial nerve and differentiate between LMN & UMN facial palsy. (4)
- 2) Write about principles of EEG with special emphasis on recording methods, techniques and clinical usefulness. (3)
 - A)
 - B) Rahul, a 20-year-old student having myopia and using -6 diopter glasses in both eyes visits his ophthalmologist with the complaints of floaters. Ophthalmologist advises him to undergo a dilated fundus evaluation to examine the periphery of the retina. (3)
 - i. Which instrument is preferred for this examination and why?
 - ii. Which other techniques can be used to examine the retina?
 - iii. What type of image is produced in each of these techniques?
 - C) Which investigations provide information regarding the retinal and choroidal vasculature? Explain the principle of any one of these investigations. (4)
- 3) Pramod, a 45-year-old tailor complains of difficulty in night vision. His maternal uncle also has a similar problem. The ophthalmologist is suspecting an inherited retinal dystrophy affecting the rod photoreceptors. (3)
 - A)
 - i. Which clinical investigation is useful to record the rod function?
 - ii. Enumerate the different waves generated in this investigation and their origin.
 - B) What is perimetry? Mention the types of perimetry with one example for each. (3)
 - C) Write the block diagram of the cochlear implant and explain its working principle. (4)
- 4) Write your experience on one topic discussed in speech and hearing subject and, if given a chance, how you would you improvise that. (5)
 - A)
 - B) Explain types of hearing aids. (3)

- C) Name any one gas law and write its applications in anaesthesia. (2)
- 5) Classify vaporizers and write on safety features of vaporizers. (3)
- A)
- B) Summarize the possible causes of fire in the operation theatre. How will you manage fire in the operation theatre? (3)
- C) Write a note on Capnography with a neat and labelled diagram. (4)

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