

Reg. No.										
----------	--	--	--	--	--	--	--	--	--	--



MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

(A constituent unit of MAHE, Manipal)

II SEM M.Tech (BME) DEGREE END-SEMESTER EXAMINATIONS, APRIL/MAY 2024.

SUBJECT: BASIC CLINICAL SCIENCES (BME 5212)

(REVISED CREDIT SYSTEM)

Tuesday, 30 April 2024, 9:30 A.M to 12:30 P.M

TIME: 3 HOURS

MAX. MARKS: 50

Instructions to Candidates:

- 1. Answer ALL questions.**
- 2. Draw labeled diagram wherever necessary.**
- 3. Make use of SEPARATE ANSWER BOOK for each part.**

PART-A: PHYSIOTHERAPY

1. Explain the different mechanisms of Pain control. 4 Marks
2. Explain the types of electrical currents and wave forms used for electrical muscle stimulation. 4 Marks
3. Explain the phases and sub phases of gait cycle. 4 Marks

PART-B: SPEECH & HEARING

1. If a child with severe to profound hearing loss does not benefit from hearing aids, what would you recommend as a future treatment? Please justify your answer. 4 Marks
2. A client presents with complaints of ear pain and blockage. Which test would you recommend for assessing the cause of these symptoms? Kindly justify your answer. 4 Marks
3. Explain the recording principle of auditory evoked potential. 5 Marks

PART-C: ORTHOPAEDICS

1. Classify types of joints and dislocation with examples. 4 Marks
2. Describe the structure of the bone and articular cartilage. 4 Marks
3. Write your vision for the future on “Advances in prosthetic limb”. 5 Marks

PART-D: RADIOLOGY

1. Describe construction of X-ray tube with diagrams. 2+2 Marks
2. Describe the principles of radiation protection. 4 Marks
3. Describe construction of image intensifier with necessary diagrams 4 Marks
