

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



# MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

A Constituent Institution of Manipal University

## II SEMESTER M.Tech (BME) DEGREE MAKE-UP EXAMINATIONS, JUNE 2017.

### SUBJECT: ALLIED HEALTH SCIENCES (BME 5202) (REVISED CREDIT SYSTEM)

Thursday, 15<sup>th</sup> June 2017, 9 am to 12 noon

TIME: 3 HOURS

MAX. MARKS: 100

#### Instructions to Candidates:

1. Answer all 5 questions from part A and all 5 questions from part B. Use separate answer books.
2. Draw labeled diagram wherever necessary

#### PART-A, SPEECH & HEARING

(Max. Marks 50)

- Q1) Explain the basic parts and function of immittance audiometer. Explain the application of immittance audiometer 10
- Q2) Explain the parts and function of cochlear implant and differentiate with that of hearing aids. 10
- Q3) Explain the parts and function of Electrophysiological test (BERA). Explain the importance of electrophysiological test in hearing evaluation 10
- Q4) Discuss the calibration issues of pure tone audiometer, immittance audiometer and BERA 10
- Q5) Discuss the role of biomedical engineers in the field of speech and hearing. 10

#### PART-B, PHYSIOTHERAPY

(Max. marks 50)

- Q1) Explain Uses of electrical stimulation. Add a note on types of currents for muscle stimulation 5+5
- Q2) Why fitness training is important? Explain different instruments used in fitness Laboratory. 10
- Q3) Mention the gait variables. Explain the instrumentation for gait analysis. 10
- Q4) Write short note on following. 5+5  
(i) Treadmill (ii) Isokinetic device.
- Q5) Write short note on following 5+5  
(i) TENS (ii) Interferential current therapy