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MANIPAL INSTITUTE OF TECHNOLOGY
(A Constituent Institute of – Manipal University)
Manipal – 576 104



II SEMESTER M.Tech (BME) DEGREE MAKE-UP EXAMINATIONS, JUNE/JULY 2016.

SUBJECT: ALLIED HEALTH SCIENCES (BME 504)
(REVISED CREDIT SYSTEM)
, 2016, 9 am to 12 noon

TIME: 3 HOURS

MAX. MARKS: 100

Instructions to Candidates:

- 1. Answer any FIVE questions from part A and FIVE questions from part B. Use separate answer books.**
- 2. Draw labeled diagram wherever necessary**

PART-A, SPEECH & HEARING

(Max. Marks 50)

- Q1) Explain the parts and function of Immittance audiometry and its purpose. 10
- Q2) What are hearing aids? Write the different classification of hearing aid. 10
- Q3) Explain, 5+5
- (i) Cochlear implant. (ii) Ear Moulds
- Q4) Explain, 5+5
- (i) spirometer (ii) speech synthesis
- Q5) Write your experience of studying speech and hearing topics and its implications. 10
- Q6) Explain, 5+5
- (i) ALD's (ii) DSP in speech and hearing

PART-B, PHYSIOTHERAPY

(Max. marks 50)

- Q1) Explain the instrumentation for electrical muscle stimulation, wave forms and types of currents used for the same. Add a note on role of electrical muscle stimulation in rehabilitation. 10
- Q2) Write short note on following. 5+5
- (i) TENS
 - (ii) Interferential current therapy
- Q3) Explain electromyography (EMG), its role in medical science. Add a note on Instrumentation for EMG. 10
- Q4) Write short notes on following. 5+5
- (i) Phases of Gait cycle.
 - (ii) Forceplateforms.
- Q5) Mention different instruments used in Cardio-Pulmonary rehabilitation and Fitness training, explain their roles. 10
- Q6) Write short note on following. 5+5
- (i) Dynamometer.
 - (ii) Short Wave Diathermy.