

Question Paper

Exam Date & Time: 12-Feb-2024 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER BPT DEGREE EXAMINATION - FEBRUARY 2024
SUBJECT: BPT 103 - BIOPHYSICS AND BASICS OF ELECTROTHERAPY
(2016RV SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Explain the physiological effects of therapeutic heat and cold. Mention any five indications and contraindications of therapeutic heat. Add a note on the technique of application of contrast bath. (20)
(5+5+5+5 = 20 marks)
- 2) Define an axis and a plane. Explain the human movement in hip, knee and ankle joints with respect to axis and plane. (20)
(4+16 = 20 marks)
- 3) Define electromagnetic induction. Describe the principles of electromagnetic induction. (10)
(2+8 = 10 marks)
- 4) Discuss the types and ranges of muscle work with examples. (10)
(5+5 = 10 marks)
- 5A) Explain pain modulation. (5)
- 5B) Explain Lewis Hunting Response and its clinical significance. (5)
(3+2 = 5 marks)
- 5C) Discuss the laws governing the electromagnetic waves. (5)
- 5D) Describe the characteristic of a charged body. (5)
- 5E) Explain the causes and effects of electric shock. (5)
- 5F) Discuss factors affecting resistance in an electrical circuit. (5)
- 6A) Define Inertia. (2)
- 6B) List ANY FOUR properties of electric lines of force. (2)
- 6C) Define electric potential. (2)
- 6D) Define lever. (2)
- 6E) Define fuse. (2)

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