

Question Paper

Exam Date & Time: 18-Mar-2025 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER BSc. BPT DEGREE EXAMINATION - MARCH 2025
SUBJECT: PTH1101 / PTH1301 - THEORETICAL CONCEPTS IN BASICS OF EXERCISE THERAPY - I
(2020 & 2024 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) Outline the classification of sensory receptors. Explain the technique for evaluating two-point discrimination and double simultaneous stimulation cortical sensation. (10)
(2+4+4 = 10 marks)
- 2) Define Reflex. Outline the importance of reflex testing. Explain the method and grading of superficial reflexes. (10)
(1+2+4+3 = 10 marks)
- 3A) Describe the method of measuring chest expansion. (5)
- 3B) Classify and explain abnormal breath sounds. (5)
(1+4 = 5 marks)
- 3C) Describe the muscle work involved in Walk standing. (5)
- 3D) Explain the muscle work involved in adopting the Starting position- Kneeling. (5)
- 4A) List any four principles of goniometry. (2)
- 4B) Write the name of two tools which are used to measure joint angles. (2)
- 4C) Outline two limitations of manual muscle testing. (2)
- 4D) Define peripheral pulses and apical pulses. (2)
- 4E) List any two indications for limb length measurement. (2)

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Question Paper

Exam Date & Time: 20-Mar-2025 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER BPT DEGREE EXAMINATION - MARCH 2025
SUBJECT: PTH1102 / PTH1303 - BIOPHYSICS AND BASICS OF ELECTROTHERAPY
(2020 / 2024 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Define kinetics and kinematics. Explain the kinematic variables to describe human motion (20)
(2+2+16 = 20 marks)
- 2) Explain the physiological and therapeutic effects of cold. Discuss the contraindications to cold therapy (20)
(12+8 = 20 marks)
- 3) Define pain and classify pain. Describe the ascending and descending pathways of pain. (10)
(2+2+6 = 10 marks)
- 4) Explain the characteristics of a charged body. List the factors affecting the capacity and the potential of an object (10)
(8+2 = 10 marks)
- 5A) Define electric shock. Describe the steps to be followed after a person encounters an electric shock (5)
- 5B) Explain the factors determining the capacity of a condenser (5)
- 5C) Discuss the methods of application of paraffin wax bath (5)
- 5D) List the factors affecting skin resistance. Explain the procedural methods to reduce skin resistance (5)
- 5E) Describe the devices used for regulating the intensity of current (5)
- 5F) Explain the production of electromagnetic force and its properties (5)
- 6A) Define axis and plane (2)
- 6B) Define Cosine law (2)
- 6C) List the therapeutic effects of heat (2)
- 6D) Define inductive reactance (2)
- 6E) List the factors affecting the intensity of current (2)

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