

Question Paper

Exam Date & Time: 10-Dec-2021 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER BPT DEGREE EXAMINATION - DECEMBER 2021
SUBJECT: PTH2101 - BIOMECHANICS
(2020 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

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| 1A) | Describe the articulation and explain the kinematics of sacroiliac joint.
(8+12 = 20 marks) | (20) |
| 1B) | Explain in detail about structure and function of the arches of foot with a diagram.
(10+10 = 20 marks) | (20) |
| 2A) | Explain in detail dynamic stabilisation of glenohumeral joint. | (10) |
| 2B) | Enlist the ligaments of hip joint and explain the functions for the same.
(3+7 = 10 marks) | (10) |
| 3A) | Write a short note on the kinematics for cervical spine flexion. | (5) |
| 3B) | Write briefly on temporal parameters of gait. | (5) |
| 3C) | Explain the biomechanics of Cylindrical Grip. | (5) |
| 3D) | Write a brief note on Automatic Locking Mechanism of the Knee. | (5) |
| 3E) | Briefly discuss the phases of running. | (5) |
| 3F) | Explain the structure and function of the articular disc of temporomandibular joint. | (5) |
| 4A) | Enlist ligaments of the elbow joint. | (2) |
| 4B) | Enlist parts of extensor hood of the finger. | (2) |
| 4C) | Enlist the phases of throwing. | (2) |
| 4D) | Enlist the muscles for mandibular elevation. | (2) |
| 4E) | What is femoral anteversion? | (2) |

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Question Paper

Exam Date & Time: 13-Dec-2021 (02:30 PM - 04:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER BOT / BPT / BSc. MIT / BSc. RRT & DT / BAOTT / BSc. PFT / BSc. CVT / BSc. EMT / BSc. RT / B.Sc.
RTT DEGREE EXAMINATION - DECEMBER 2021
SUBJECT: PAT 2103 - PATHOLOGY
(2020 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

Draw diagrams wherever necessary.

- 1A) Describe the events in wound healing by primary intention with diagrams. (6)
- 1B) Explain the factors that influence wound healing. (4)
- 2A) Define anemia. Classify anemia based on etiology. (3)
(1+2 = 3 marks)
- 2B) Describe clinical features, etiology and basic laboratory investigations for iron deficiency anemia. (7)
(2+2+3 = 7 marks)
- 3A) Describe four cardinal signs and list two causes of acute inflammation. (5)
- 3B) Mention five differences between benign and malignant tumors. (5)
- 3C) Describe the morphology of primary, secondary and miliary tuberculosis. (5)
- 3D) Describe the pathogenesis and list two causes of hypovolemic shock. (5)
- 4A) Define metaplasia. Give an example. (2)
- 4B) List four causes of thrombocytopenia. (2)
- 4C) Define aneurysm and mention the types of aneurysm. (2)
- 4D) Mention any four clinical features of hyperthyroidism. (2)
- 4E) List the modes of transmission of Hepatitis B. (2)

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Question Paper

Exam Date & Time: 15-Dec-2021 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER BPT DEGREE EXAMINATION - NOVEMBER/DECEMBER 2021
SUBJECT: PTH2102 - THEORETICAL CONCEPTS IN EXERCISE THERAPY - I
(2020 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Explain in detail any two determinants of resistance training and discuss progressive resistance exercise. (20)
(10+10 = 20 marks)
- 2) Explain the arthrokinematics of peripheral joints and explain the grades of joint mobilisation with a neat diagram. (20)
(10+10 = 20 marks)
- 3) Explain the adjuncts for stretching. (10)
- 4) Summarize physiological and therapeutic effects of mobilization. (10)
(5+5 = 10 marks)
- 5A) Explain any two merits and any two demerits of home program. (5)
- 5B) Explain the principles of group exercises. (5)
- 5C) Explain the physiological effects of spinal traction. (5)
- 5D) Explain delayed onset muscles of muscle soreness. (5)
- 5E) Outline the concept of periodization. (5)
- 5F) Classify muscle fibres based on resistance to fatigue. (5)
- 6A) List any two contraindications for strength training. (2)
- 6B) List any two indications of spinal traction. (2)
- 6C) List any two precautions for strength training. (2)
- 6D) Define stretching. (2)
- 6E) Classify traction. (2)

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Question Paper

Exam Date & Time: 17-Dec-2021 (02:30 PM - 04:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER BPT DEGREE EXAMINATION - NOVEMBER/DECEMBER 2021
SUBJECT: PTH2103 - THEORETICAL CONCEPTS IN ELECTROTHERAPY - II
(2020 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) Define motor point. Explain the techniques of motor point stimulation for facial muscles. Add a note on indications and contraindications of neuromuscular electrical stimulation. (10)
(1+6+3 = 10 marks)
- 2) Explain strength duration curve in detail with clinical importance. (10)
(5+5 = 10 marks)
- 3A) Explain physiological principles of direct current. (5)
- 3B) Explain indication and contraindication of TENS. (5)
- 3C) Explain iontophoresis for superficial wound. (5)
- 3D) Explain the advantages and disadvantages of Faradic-galvanic test. (5)
- 4A) List the effects of constant direct current. (2)
- 4B) What are the parameters of IFT? (2)
- 4C) List physiological effects of medium frequency currents. (2)
- 4D) What is tetanic contraction? (2)
- 4E) What is faradism under tension? (2)

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