

Question Paper

Exam Date & Time: 10-Dec-2018 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER BPT DEGREE EXAMINATION - DECEMBER 2018

SUBJECT: BPT 201 - BIOMECHANICS

(2016 SCHEME)

Monday, December 10, 2018 (14.00 - 17.00)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1A) **Explain Hip joint biomechanics under following:** (20)
i) Angulations of Acetabulum and femur
ii) Close pack position, loose pack position and position of maximum articular congruence
iii) Kinematics of Hip joint
- 1B) Explain the structure and function of Extensor mechanism of finger with help of labelled diagram. Add a note on different Prehension activities of Hand. (20)
(10+10 = 20 marks)
- 2A) Explain the Determinants of gait. Describe gait deviations and compensations due to knee extensor weakness. (10)
(6+4 = 10 marks)
- 2B) Explain the systems involved in maintaining Posture. Add a note on anterior pelvic tilt and its effects. (10)
(6+4 = 10 marks)

3) Short Answers:

- 3A) Describe the role of rotator cuff muscles in dynamic stability of glenohumeral joint. (5)
- 3B) Describe factors providing stability to cervical spine. (5)
- 3C) Describe the movements of sacrum and Sacro-iliac joint. (5)
- 3D) Describe the Role of patella in knee extension. (5)
- 3E) Describe the carpal motions during Full extension to flexion of wrist. (5)
- 3F) Describe the Kinematics of Rib cage. (5)

4) Brief Answer:

- 4A) Mention functions of ligamentum flavum. (2)
- 4B) Mention the functions of meniscus of knee joint. (2)
- 4C) Mention functions of Tensor fascia lata. (2)
- 4D) Mention the position of the hip in which Gluteus Maximus muscle is most efficient as hip extensor. (2)

4E) Mention parts and functions of lateral collateral ligament of ankle joint. (2)

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Question Paper

Exam Date & Time: 13-Dec-2018 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER BPT DEGREE EXAMINATION - DECEMBER 2018

SUBJECT: BPT 203 - EXERCISE THERAPY - I

(2016 SCHEME)

Thursday, December 13, 2018 (14.00 - 17.00)

Marks: 100

Duration: 180 mins.

- 1) Explain mobilization techniques to enhance glenohumeral joint flexibility. Add a short note on mobilization techniques that help in relieving shoulder pain. (20)
(15+5 = 20 marks)
- 2) Write in detail about Indications, Precautions and Contraindications for resistance training. (20)
- 3) Describe the indications and effects of spinal traction. (10)
(5+5 = 10 marks)
- 4) Describe Principles of stretching. (10)

5. Short Answers:

- 5A) Brief on the physiological adaptations to Resistance training. (5)
- 5B) Discuss the rationale for dosage of movement for non- thrust and trust techniques. (5)
(2+3 = 5 marks)
- 5C) Describe trick movements with appropriate examples. (5)
- 5D) Describe the procedure for static stretching. (5)
- 5E) Describe grades of muscle strength. (5)
- 5F) Describe Proprioceptive Neuromuscular Facilitation stretching techniques. (5)

6. Brief Answers:

- 6A) List the tools used to quantify muscle strength? (2)
- 6B) What is muscle re-education? (2)
- 6C) List the muscles that are prone for tightness in hip joint region. (2)
- 6D) Define joint mobilization. (2)
- 6E) Define trick movements. (2)

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Question Paper

Exam Date & Time: 06-Dec-2018 (02:00 PM - 04:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

**THIRD SEMESTER B.O.T./ B.Sc. P.F.T./ BPT/ B.Sc. C.V.T./B.Sc. R.T./ B.Sc. M.I.T./ B.Sc. RRT&DT
DEGREE EXAMINATION - DECEMBER 2018
SUBJECT : MICR 201 - MICROBIOLOGY
(2016 SCHEME)
Thursday, December 06, 2018 (14.00 - 16.00)**

Answer ALL questions:

Marks: 50

Duration: 120 mins.

- 1) With a labelled diagram explain the cell wall of gram positive and gram negative bacteria. (10)
(5+5 = 10 marks)
- 2) Explain the etio-pathogenesis and laboratory diagnosis of cholera. (10)
(1+4+5 = 10 marks)
- 3) **Write short notes on:**
 - 3A) Laboratory diagnosis of HIV infection (5)
 - 3B) Bacterial growth curve (5)
 - 3C) Pathogenesis of poliomyelitis (5)
 - 3D) Laboratory diagnosis of viral infections (5)
- 4) **Answer the following questions:**
 - 4A) Indirect immunofluorescence test (2)
 - 4B) Clinical features of urinary tract infections (2)
 - 4C) Types of vaccines with examples (2)
 - 4D) Classification of PUO (2)
 - 4E) Morphology of Entamoeba histolytica (2)

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MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER B.O.T./ B.Sc. P.F.T./ BPT/ B.Sc. M.R.T./B.Sc. C.V.T./B.Sc. R.T./ B.Sc. M.I.T./B.Sc.
RRT&DT DEGREE EXAMINATION - DECEMBER 2018
SUBJECT : PATH 201 - PATHOLOGY
(2016 SCHEME)
Monday, December 03, 2018 (14.00 - 16.00)

Answer ALL questions:

Marks: 50

Duration: 120 mins.

- 1A) Define necrosis. List any three types of necrosis with examples. (5)
(2+3 = 5 marks)
- 1B) Define granuloma and illustrate it with a suitable diagram. Enumerate the causes of granulomatous inflammation. (5)
(3+2 = 5 marks)
- 2A) Describe the predisposing factors and complications of atherosclerosis. (5)
- 2B) Describe the aetiology and clinical features of rheumatic heart disease. (5)
- 3A) Differentiate between healing by primary and secondary intention with suitable examples. (5)
- 3B) Define embolism. Enlist the types of embolism. Write a note on the clinicopathological consequences of pulmonary thromboembolism. (5)
(1+3+1 = 5 marks)
- 3C) i) Write a short notes on: Emphysema (5)
- 3C) ii) Write a short notes on: Jaundice (5)
- 4A) Mention the confirmatory tests for iron deficiency anaemia and thalassaemia. (2)
- 4B) List four features of a malignant tumour. (2)
- 4C) List four complications of diabetes mellitus. (2)
- 4D) List four features of nephrotic syndrome. (2)
- 4E) List four causes of thrombocytopenia. (2)

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