

Question Paper

Exam Date & Time: 16-Mar-2021 (02:30 PM - 04:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER B.O.T./ B.Sc. P.F.T./ BPT/ B.Sc. M.R.T./B.Sc. RADIOTHERAPY TECHNOLOGY/ B.Sc. C.V.T./B.Sc.
R.T./B.Sc. M.I.T./B.Sc. RRT&DT/B.Sc. EMT/B.Sc. AOTT DEGREE EXAMINATION - MARCH 2021
SUBJECT: PATH 201 - PATHOLOGY
(2016/2016 RV/2019 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) Define anaemia. Describe the clinical features and laboratory diagnosis of nutritional anaemias. (10)
(2+8 = 10 marks)
- 2A) Define and classify fracture. Describe the process of fracture healing. (5)
(2+3 = 5 marks)
- 2B) Compare rheumatoid arthritis and osteoarthritis. (5)
- 3A) Describe the features of malignancy and routes of tumour spread. (5)
- 3B) List the types of shock and describe the pathogenesis of any one. (5)
- 3C) List the predisposing factors and complications of atherosclerosis. (5)
- 3D) Compare nephrotic syndrome and nephritic syndrome with suitable examples. (5)
- 4A) List the various types of emphysema. (2)
- 4B) Define cirrhosis of liver. List two causes. (2)
- 4C) List the cardinal features of acute inflammation. (2)
- 4D) List four examples of X-linked diseases. (2)
- 4E) List the various types of necrosis with suitable examples. (2)

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Question Paper

Exam Date & Time: 18-Mar-2021 (02:30 PM - 04:30 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/B.Sc. EMT/B.Sc. AOTT
DEGREE EXAMINATION - MARCH 2021
SUBJECT: MICR 201 - MICROBIOLOGY
(2016/2019 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) With a labelled diagram explain the cell wall of gram positive and gram negative bacteria. (10)
(5+5 = 10 marks)
- 2) Explain the pathogenesis and laboratory diagnosis of staphylococcal skin infections. (10)
(5+5 = 10 marks)

3. Write short notes on:

- 3A) Primary and secondary humoral immune response. (5)
- 3B) Autoclave. (5)
- 3C) Investigation of classical PUO. (5)
- 3D) Laboratory diagnosis of hepatitis B virus infection. (5)

4. Answer the following:

- 4A) Morphological classification of fungi. (2)
- 4B) Write two predisposing factors of urinary tract infections. (2)
- 4C) Immuno-prophylaxis of poliomyelitis. (2)
- 4D) Functions of bacterial capsule. (2)
- 4E) Write the principle and one use of direct immunofluorescence test. (2)

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Question Paper

Exam Date & Time: 22-Mar-2021 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER BPT DEGREE EXAMINATION - MARCH 2021
SUBJECT: BPT 205 - ELECTROTHERAPY - II
(2016 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Explain the production of heat in the tissues with condenser field method of short wave diathermy with diagrams. Explain the therapeutic effects and uses of short wave diathermy. (20)
(8+12 = 20 marks)
- 2) Explain production of ultrasound with a neat labelled diagram. Discuss the methods of application of ultrasound with an example for each. Add a note on contraindications. (20)
(6+9+5 = 20 marks)
- 3) Discuss the types of Infrared lamps in detail and enumerate their uses. (10)
(7+3 = 10 marks)
- 4) Discuss the physiological effects of laser therapy. Add a note on indications and contraindications. (10)
(4+3+3 = 10 marks)

5. Short Notes :

- 5A) Describe the role of extracorporeal shock wave therapy in tissue healing. (5)
- 5B) Discuss in detail the application of PUVA therapy. (5)
- 5C) Explain the non-thermal effects of ultrasound. (5)
- 5D) Explain the contraindications in pulsed short wave diathermy. (5)
- 5E) What is transfer of energy between oscillating systems? Explain with the help of a diagram. (5)
- 5F) Discuss the dangers and precautions of constant direct current. (5)

6. Brief Notes :

- 6A) Mention ANY **TWO** therapeutic effects and uses of cathodal galvanism. (2)
- 6B) What is beam non uniformity ratio (BNR)? (2)
- 6C) Name ANY **TWO** indications for the use of LASER (2)
- 6D) Mention ANY **TWO** advantages of electromyography biofeedback. (2)
- 6E) List the benefits of combination therapy. (2)

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Question Paper

Exam Date & Time: 26-Mar-2021 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER BPT DEGREE EXAMINATION - MARCH 2021

SUBJECT: BPT 203 - EXERCISE THERAPY - I

(2016 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Explain the strength training strategies based on Manual Muscle testing (20)
- 2) Define stretching. Discuss the principles of stretching. Add a note on various types of stretching (20)
(2+10+8 = 20 marks)
- 3) Describe concave convex rule with appropriate examples (10)
- 4) Describe in detail the principles of manual muscle testing (MMT). Add a note on limitations of MMT (10)
(5+5 = 10 marks)

5. Write Short answers:

- 5A) List the indications and contraindications of joint mobilization (5)
- 5B) Discuss the adjunct modalities used in stretching (5)
- 5C) How to differentiate between a one joint muscle and two joint muscle in MMT? Give an example (5)
- 5D) Explain SAID principle with an example (5)
- 5E) Discuss the effects and uses of spinal traction (5)
- 5F) Name the types of trick movements with an examples (5)

6. Write Brief Answers :

- 6A) What is joint Manipulation? (2)
- 6B) Mention any **two** contraindications for stretching (2)
- 6C) What is the most objective grade of MMT? (2)
- 6D) List the contraindications of spinal traction (2)
- 6E) List the precautions while implementing strength training (2)

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