

Question Paper

Exam Date & Time: 28-Jun-2022 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER BOT / B.Sc. PFT / BPT/ B.Sc. OPTOM. / B.Sc. CVT /B.Sc. RT /B.Sc. MIT /B.Sc. RRT&DT / B.Sc. EMT / B.Sc. AOTT / B.Sc. MLT / B.Sc. NMT / B.Sc. CND DEGREE EXAMINATION - JUNE 2022
SUBJECT: BIC1201 - BIOCHEMISTRY
(2020 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) Write the reactions of gluconeogenesis from pyruvate mentioning the site and subcellular site. (10)
- 2A) Define micro and macro minerals. Mention the sources and THREE functions each of calcium and phosphorus. (5)
- 2B) Define biologic value of proteins. List the protein sources of high and low biologic values. Define limiting amino acids with suitable examples. (5)
- 3A) Explain the procedure and interpretation of oral glucose tolerance test. Add a note on significance of HbA1c estimation. (5)
- 3B) Explain the structure of starch and glycogen with schematic representation and list the difference between them. (5)
- 3C) Mention the site and subcellular site of lipolysis and describe the reactions. Name the regulatory enzyme. (5)
- 3D) Illustrate the complexes of ETC with their components and order of arrangement and mention the mobile electron carriers. (5)
- 4A) Write ONE reaction in the collagen biosynthesis which requires vitamin C and mention its significance. (2)
- 4B) Name the enzyme defect and tissue affected in Type I and Type V glycogen storage disorders. (2)
- 4C) Mention the TWO physiologically important compounds each derived from glycine and tyrosine. (2)
- 4D) What is the normal level of serum albumin? Name TWO conditions in which it is altered. (2)
- 4E) List TWO differences between DNA & RNA. (2)

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Question Paper

Exam Date & Time: 30-Jun-2022 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER BOT / BPT/ B.Sc. CVT /B.Sc. RT /B.Sc. MIT /B.Sc. RRT&DT / B.Sc. EMT / B.Sc. AOTT DEGREE
EXAMINATION - JUNE/JULY 2022
SUBJECT: ANA1201 - ANATOMY - II
(2020 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

1. Describe the median nerve under following headings:

- | | | |
|-----|------------------------|-----|
| 1A) | Origin and root value. | (2) |
| 1B) | Course. | (2) |
| 1C) | Distribution. | (5) |
| 1D) | Applied anatomy. | (1) |

2. Describe the gluteus maximus muscle under:

- | | | |
|-----|--|-----|
| 2A) | Attachments, nerve supply, actions. | (5) |
| 2B) | Applied anatomy. | (1) |
| 2C) | Mention Any EIGHT structures lying deep to it. | (4) |

- | | | |
|-----|---|-----|
| 3A) | Describe the origin, course and distribution of obturator nerve. | (5) |
| 3B) | Describe the attachments, nerve supply and action of sternocleidomastoid muscle. | (5) |
| 3C) | Describe the elbow joint. | (5) |
| 3D) | Describe the boundaries of popliteal fossa. | (5) |
| 4A) | Mention the origin and applied aspect of radial artery. | (2) |
| 4B) | List the carpal bones to which the flexor retinaculum is attached. | (2) |
| 4C) | Mention the attachments of sartorius muscle. | (2) |
| 4D) | Mention the formation and termination of cephalic vein. | (2) |
| 4E) | Mention the muscles in the lateral compartment of leg and the nerve supplying them. | (2) |

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Question Paper

Exam Date & Time: 02-Jul-2022 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

**SECOND SEMESTER BOT / B.Sc. PFT / BPT/ B.Sc. OPTOM. / B.Sc. CVT /B.Sc. RESPIRATORY THERAPY /B.Sc. MIT
/B.Sc. RRT&DT / B.Sc. EMT / B.Sc. AOTT / B.Sc. MLT / B.Sc. NMT/B.Sc. RADIOTHERAPY TECHNOLOGY DEGREE
EXAMINATION - JUNE/JULY 2022
SUBJECT: PHY1201 - PHYSIOLOGY - II
(2020 SCHEME)**

Marks: 50

Duration: 120 mins.

**All questions are compulsory. Write brief, clear and legible answers.
Illustrate your answers with diagrams and flow charts wherever appropriate.**

- 1) Name the Anterior pituitary hormones. Describe the actions of growth hormone. Add a note on Acromegaly. (10)
(3+5+2 = 10 marks)
- 2) With the help of neat diagram describe the origin, course, and termination of pyramidal tract. List the differences between upper motor lesion and lower motor neuron lesion. (10)
(6+4 = 10 marks)
- 3A) Explain the different phases of gastric juice secretion. (5)
- 3B) Define GFR, give its normal value. Explain briefly the factors regulating GFR. (5)
(2+3 = 5 marks)
- 3C) Explain the ovarian changes during menstrual cycle and briefly explain the influence of different hormones on ovarian cycle. (5)
(3+2 = 5 marks)
- 3D) Enumerate the functions of hypothalamus. Explain any ONE in detail. (5)
(3+2 = 5 marks)
- 4A) Mention the cause and Any TWO features of Cretinism. (2)
- 4B) Enumerate the functions of gall bladder. (2)
- 4C) List the different types of small intestinal movements. (2)
- 4D) Classify sensory receptors based on type of stimulus with examples for each. (2)
- 4E) Mention the cause and treatment of Parkinson's disease. (2)

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Question Paper

Exam Date & Time: 04-Jul-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER BPT DEGREE EXAMINATION - JUNE/JULY 2022
SUBJECT: PTH1201 - THEORETICAL CONCEPTS IN BASICS OF EXERCISE THERAPY II
(2020 SCHEME)

Answer ALL questions.

Illustrate your answers with diagrams wherever necessary.

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Define Passive movements. Explain in detail the principles, effects and uses of passive movements. Add a note on indications and contraindications for passive movement. (20)
(2+4+4+2+4+4 = 20 marks)
- 2) Define Postural drainage. Explain in detail the principles, effects and uses of postural drainage. Describe the postural drainage for any one upper lobe segment of the lungs. Add a note on techniques aiding postural drainage. (20)
(2+4+4+2+4+4 = 20 marks)
- 3) Describe the techniques of suspension therapy for the left hip in sagittal plane. Add a note on the effects and uses of suspension therapy. (10)
(6+2+2 = 10 marks)
- 4) Explain the physiological basis of relaxation. Describe in detail the principles of relaxation. (10)
(4+6 = 10 marks)
- 5A) Describe the factors affecting joint mobility. (5)
- 5B) Outline any five techniques of therapeutic massage. (5)
- 5C) Enumerate the effects of breathing exercises. (5)
- 5D) Describe the types of trick movements. (5)
- 5E) Explain briefly the physical properties of water. (5)
- 5F) Enumerate the uses of any five therapeutic gymnasium equipment. (5)
- 6A) Define Trick movements. (2)
- 6B) Indication of Hold-Relax technique. (2)
- 6C) Mention the components of suspension unit. (2)
- 6D) Define Bronchopulmonary segments. (2)
- 6E) What is Pursed-lip breathing? (2)

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Question Paper

Exam Date & Time: 06-Jul-2022 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER BPT DEGREE EXAMINATION - JUNE/JULY 2022
SUBJECT: PTH1202 - THEORETICAL CONCEPTS IN ELECTROTHERAPY I
(2020 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) Explain the therapeutic effects of short wave diathermy. Add a note on dangers of short wave diathermy (6+4 = 10 marks) (10)
- 2) Explain the treatment parameters and methods of application of therapeutic ultrasound (4+6 = 10 marks) (10)
- 3A) Discuss the dangers and contraindications of microwave diathermy (2.5+2.5 = 5 marks) (5)
- 3B) Explain the therapeutic effects of low level LASER therapy (5)
- 3C) Discuss the dosage calculation of ultraviolet radiation therapy (5)
- 3D) Explain the physiological effects of Infrared radiation therapy (5)
- 4A) Name the types of therapeutic currents (2)
- 4B) Mention any TWO indications and any TWO contraindications of extra corporeal shock wave therapy (2)
- 4C) What is attenuation of ultrasound? (2)
- 4D) List the modes of short wave diathermy (2)
- 4E) Mention any FOUR physiological effects of ultraviolet radiation therapy (2)

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