

Question Paper

Exam Date & Time: 11-Feb-2020 (02:00 PM - 04:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER B.O.T./ B.Sc. M.L.T./ B.Sc. P.F.T./ B. Sc. E.M.T./B.Sc. E.S.S./ B.Sc. N.M.T./B. Opt./ B.Sc. H.I.M./ BPT/ B.Sc. M.R.T./B.Sc. C.V.T./B.Sc. R.T./ B.Sc. M.I.T./B.Sc. RRT&DT/ M.Sc. M.R.P. DEGREE EXAMINATION - FEBRUARY 2020

SUBJECT: ANAT 103/ANAT 101 - ANATOMY-I/ANATOMY
(2016 RV/2018/2019 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) Name the parts of the gastro-intestinal tract. Describe the anal canal in detail. (10)
(4+6 = 10 marks)
- 2) Name the parts of the respiratory tract. Describe the pharynx in detail. (10)
(4+6 = 10 marks)

3. Short notes:

- 3A) Right atrium of heart (5)
- 3B) Kidneys (5)
- 3C) Testis (5)
- 3D) Medulla oblongata (5)

4. Short answers:

- 4A) Classification (types) of bones (2)
- 4B) Uterus (2)
- 4C) Eyeball (2)
- 4D) Pituitary gland (2)
- 4E) Pyramidal (cortico-spinal) tract (2)

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Question Paper

Exam Date & Time: 12-Feb-2020 (02:00 PM - 04:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER B.O.T. / B.Sc. M.L.T. / B.Sc. P.F.T. / B.Sc. AOTT / B. Sc. E.M.T. / B.Sc. E.S.S. / B.Sc. N.M.T. / B. Opt. / B.Sc. H.I.M. / BPT / B.Sc. C.V.T. / B.Sc. R.T. / B.Sc.

M.I.T. / B.Sc. RRT&DT / M.Sc. M.R.P. DEGREE EXAMINATION - FEBRUARY 2020

SUBJECT: PHYS 101 - PHYSIOLOGY- I / PHYSIOLOGY

(2016 RV/2018/2019 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1A) Explain the excitation contraction coupling in a skeletal muscle with the help of a flow chart. (5)
- 1B) Draw a labelled diagram of a nerve action potential and mention the ionic basis for different phases. (5)
- 2A) Explain the chemical regulation of respiration. (5)
- 2B) Describe the mechanism of normal inspiration and expiration in the form of flow chart. (5)
- 3A) Draw and label ECG recorded from limb lead II. List any two clinical applications of ECG. (5)
- 3B) Define cardiac output and give its normal value. describe any three factors regulating cardiac output. (5)
- 3C) Draw a neat labeled diagram of visual pathway. Add a note on myopia. (5)
- 3D) Describe the intrinsic mechanism of blood clotting pathway in the form of a flow chart. (5)
- 4A) Name two factors regulating erythropoiesis. (2)
- 4B) Draw a labeled diagram of a neuron. (2)
- 4C) List two differences between active and passive transport. (2)
- 4D) List two functions of vestibular apparatus. (2)
- 4E) Name the different types of hypoxia. (2)

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Question Paper

Exam Date & Time: 13-Feb-2020 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER BPT DEGREE EXAMINATION - FEBRUARY 2020
SUBJECT: BPT 103 - BIOPHYSICS AND BASICS OF ELECTROTHERAPY
(2016 RV SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Write the Physiological and therapeutic effect of heat. Discuss ANY TWO methods of application of superficial heat. (20)
(10+10 = 20 marks)
- 2) Add a brief note on microscopic structure of connective tissue. List various connective tissue structures. Describe the mechanical properties of Any TWO connective tissue structure. (20)
(5+5+10 = 20 marks)
- 3) Explain with help of stress strain curve the properties of strength, stiffness and brittleness. (10)
- 4) Define electric shock. Discuss about the factors influencing severity of shock. Add a note on role of power plugs in preventing shock. (2+5+3 = 10 marks) (10)
- 5A) Discuss pain gate mechanism. (5)
- 5B) Explain in detail the laws governing Electromagnetic spectrum. (5)
- 5C) Describe various types of muscle work. (5)
- 5D) Add a note on the cardinal plane of motion for human body, with movement as example for each. (5)
- 5E) Laws governing electromagnetic induction. (5)
- 5F) Charging by inductance and conductance. (5)
- 6A) Define Inverse Square law. (2)
- 6B) Mention ANY FOUR uses of condenser. (2)
- 6C) Define Torque. (2)
- 6D) List the types of electrodes. (2)
- 6E) What are eddy currents? (2)

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Question Paper

Exam Date & Time: 18-Feb-2020 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER BPT DEGREE EXAMINATION - FEBRUARY 2020

SUBJECT: BPT 101 - BASICS OF EXERCISE THERAPY - I

(2016 RV SCHEME)

Answer ALL the questions.

Draw diagrams wherever necessary.

Marks: 100

Duration: 180 mins.

- 1) Explain the features of an Ideal therapeutic gymnasium. Add a note on ANY FIVE equipments available in the gymnasium to improve the cardiovascular endurance. (20)
(10+10 = 20 marks)
- 2) Define postural drainage. Explain the principles of postural drainage. Discuss ANY FIVE contraindications of postural drainage. Add a note on the postural drainage for Upper lobe on the right side. (20)
(2+8+5+5 = 20 marks)
- 3) Classify Deep sensations. Discuss the method of evaluation of ANY TWO deep sensations. (10)
- 4) Describe the principles for organisation of group exercises for elderly people. (10)
- 5A) Discuss the mechanism of lateral pelvic tilt. (5)
- 5B) Effects and uses of standing position. (5)
- 5C) Discuss the components of a reflex arc. (5)
- 5D) Describe the technique of measuring the chest expansion. (5)
- 5E) Discuss the palpatory method of measuring the blood pressure. (5)
- 5F) Discuss pursed lip breathing exercises. (5)
- 6A) What are recreational exercises? (2)
- 6B) Mention ANY TWO cortical sensations. (2)
- 6C) Define Bronchopulmonary segment. (2)
- 6D) Define incentive spirometry. (2)
- 6E) Mention ANY TWO disadvantages of home program. (2)

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