

Question Paper

Exam Date & Time: 19-Apr-2021 (02:30 PM - 04:30 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. RADIOTHERAPY TECHNOLOGY/B.Sc. C.V.T./B.Sc. R.T./ B.Sc. M.I.T./B.Sc. RRT&DT DEGREE EXAMINATION -
APRIL 2021

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 endocrine glands. Describe the thyroid gland in detail. (10)
(4+6 = 10 marks)
- 2) Name the components of the extra-hepatic biliary apparatus. Describe the liver in detail. (10)
(4+6 = 10 marks)

3. Write Short Notes on:

- 3A) Fibre system (white matter) of cerebrum (5)
- 3B) Prostate (5)
- 3C) Kidneys (5)
- 3D) Blood supply to the heart (5)

4. Write Short Notes on:

- 4A) Cartilage (2)
- 4B) Larynx (2)
- 4C) Large intestine (2)
- 4D) Lungs (2)
- 4E) Uterine tube (2)

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Question Paper

Exam Date & Time: 21-Apr-2021 (02:30 PM - 04:30 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.S.S. / B. Opt. / B.Sc. H.I.M. / BPT / B.Sc. C.V.T. / B.Sc. RADIOTHERAPY/B.Sc. R.T. / B.Sc. M.I.T. / B.Sc. RRT&DT DEGREE EXAMINATION - APRIL 2021
SUBJECT: PHYS 101 - PHYSIOLOGY- I / PHYSIOLOGY
(2016 RV/2019 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1A) Name different stages of erythropoiesis. Mention any two developmental changes occurring during different stages of erythropoiesis. (5)
- 1B) Write the steps involved in intrinsic pathway of blood coagulation in the form of a flow chart. (5)
- 2A) Describe left ventricular pressure and volume changes during a cardiac cycle with the help of a graph. (5)
- 2B) Draw a neat labeled diagram of a normal ECG recorded from limb lead II. Mention the causes for different waves in ECG (5)
- 3A) Draw a neat labelled diagram of oxygen hemoglobin dissociation curve. Enumerate three factors shifting the curve to the right. (5)
- 3B) Name the types of refractory errors. Mention the cause and correction of the same (5)
- 3C) Describe the events that occur during neuromuscular transmission in the form of flow chart. (5)
- 3D) Write the differences between simple diffusion and active transport. Explain primary active transport with an example. (5)
- 4A) Write a note on impedance matching (2)
- 4B) Define vital capacity and give its normal value. (2)
- 4C) Name the contractile proteins of the skeletal muscle (2)
- 4D) Write two differences between rods and the cones. (2)
- 4E) Draw a labeled diagram of the nerve action potential (2)

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Question Paper

Exam Date & Time: 23-Apr-2021 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER BACHELOR OF PHYSIOTHERAPY DEGREE EXAMINATION - APRIL 2021
SUBJECT: BPT 103 - BIOPHYSICS AND BASICS OF ELECTROTHERAPY
(2016 RV SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Define a lever. Explain in detail the types of levers in the human body with examples for each. (20)
(4+10+6 = 20 marks)
- 2) Explain the physiological effects of therapeutic heat. Mention ANY FIVE indications and contraindications of therapeutic heat. Add a note on the technique of application of paraffin wax bath. (20)
(10+5+5 = 20 marks)
- 3) Explain resistances in series and in parallel with appropriate diagrams (10)
- 4) Discuss the theories of electricity. Explain the characteristics of a charged body. (10)
(5+5 = 10 marks)
- 5A) Discuss the properties of ligament (5)
- 5B) Discuss ANY **TWO** laws governing electromagnetic radiation (5)
- 5C) Describe the types of muscle work (5)
- 5D) Explain the types of electrodes used in electrotherapy (5)
- 5E) Describe the properties of magnet (5)
- 5F) Elaborate the factors affecting the bioelectrical skin impedance (5)
- 6A) Define torque (2)
- 6B) What are eddy currents? (2)
- 6C) What is angle of pull? (2)
- 6D) Mention the types of shock (2)
- 6E) Define one ampere (2)

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