

Question Paper

Exam Date & Time: 19-Apr-2021 (02:30 PM - 04:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER B.Sc.M.I.T./ B.O.T./B.Sc.C.V.T./B.Sc.RADIOOTHERAPY /B.Sc.P.F.T./BPT/B.Sc.E.M.T./B.Sc.A.T./
B.SC.RRT & DT/B.Sc.R.T./B.Opt./B.Sc.M.L.T./B.Sc.C.N.D./ B.Sc.N.M.T. DEGREE EXAMINATION - APRIL 2021
SUBJECT: ANA1101: ANATOMY-I / ANA1103: ANATOMY
(2020 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) Name the parts of the brainstem. Describe the external and internal features of the pons. (10)
(3+7 = 10 marks)
- 2) Name the parts of the renal system. Describe the kidneys in detail (10)
(4+6 = 10 marks)

3. Write Short Notes on:

- 3A) Lungs (5)
- 3B) Uterus (5)
- 3C) Pituitary gland (5)
- 3D) Blood supply to heart (5)

4. Write Short Notes on:

- 4A) Cartilage (2)
- 4B) Pharynx (2)
- 4C) Large intestine (2)
- 4D) Pancreas (2)
- 4E) Spermatic cord (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.Opt./ B.O.T./ B.Sc.N.M.T./ B.Sc.E.M.T./ B.Sc.A.T./ B.Sc.M.L.T./ B.Sc.P.F.T./ B.SC.RRT & DT /
B.Sc.R.T./B.Sc.M.I.T./ B.Sc.C.V.T./ BPT /B.Sc.RADIOTHERAPY TECHNOLOGY/B.Sc.C.N.D. DEGREE EXAMINATION -
APRIL 2021
SUBJECT: PHY1101: Physiology - I / PHY1103: Physiology
(2020 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1A) Explain excitation- contraction coupling in skeletal muscle with the help of a flow chart. (5)
- 1B) Draw a neat labelled diagram of action potential recorded from a nerve fiber and give the ionic basis for different phases of the action potential. (5)
- 2A) Define blood pressure. Mention its normal value. Describe the response of baroreceptor for increased blood pressure. (5)
- 2B) Draw a labelled diagram of normal ECG recorded from limb lead II. Give the causes for the different waves of ECG. (5)

3. Write Short Notes on:

- 3A) Draw a labelled diagram of the visual pathway. Indicate lesion of visual pathway at left optic tract and name the defect in field of vision. (5)
- 3B) Explain the extrinsic pathway of blood coagulation, with the help of a flow chart. (5)
- 3C) List the antigens and antibodies in different blood groups of ABO and Rh systems. (5)
- 3D) Name the muscles of inspiration. Describe the mechanism of inspiration with help of a flow chart. (5)

4. Write Short Notes on:

- 4A) Name the cause and correction of myopia. (2)
- 4B) Define active transport. Give one example for the same. (2)
- 4C) Mention any **TWO** factors that shift the oxygen-hemoglobin dissociation curve to the right. (2)
- 4D) Name the receptors for taste and smell. (2)
- 4E) Define hypoxia. Mention the types of hypoxia. (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 B.Sc. MEDICAL IMAGING TECHNOLOGY DEGREE EXAMINATION - APRIL 2021
SUBJECT: MIT1101 - RADIATION PHYSICS
(2020 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Define the grid. Explain the different types of the grid. Discuss the evaluation of grid performance in detail. (20)
- 2) Discuss in detail about the principle and application of rectifier in x-ray production (20)
- 3) Discuss Interaction of electron with the target in detail. (10)
- 4) Discuss the rotating x-ray tube in detail. (10)
- 5A) Discuss the principle of autotransformer in detail. (5)
- 5B) Discuss cones and cylinders in detail (5)
- 5C) Factors influencing the quantity of x-ray (5)
- 5D) Draw and label the x-ray circuits (5)
- 5E) List the properties of X-rays (5)
- 5F) Explain Air gap technique in detail and write its application in radiography (5)
- 6A) Define fuses (2)
- 6B) Describe the structure of atom (2)
- 6C) Half value layer (2)
- 6D) Define electromagnetic radiation. (2)
- 6E) Step-up transformer (2)

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