

# 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 (5) for different phases of the action potential.
- 2A) Define blood pressure. Mention its normal value. Describe the response of baroreceptor for (5) increased blood pressure.
- 2B) Draw a labelled diagram of normal ECG recorded from limb lead II. Give the causes for the different (5) waves of ECG.

### 3. Write Short Notes on:

- 3A) Draw a labelled diagram of the visual pathway. Indicate lesion of visual pathway at left optic tract (5) and name the defect in field of vision.
- 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. RADIOTHERAPY TECHNOLOGY DEGREE EXAMINATION - APRIL 2021  
SUBJECT: RTT1101 - BASIC PHYSICS  
(2020 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

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| 1)  | Write a short note on transformers and rectification.        | (20) |
| 2)  | Electromagnetic waves and their properties.                  | (20) |
| 3)  | Types of transformers used in X-ray equipment.               | (10) |
| 4)  | Write a short note on errors in measurement.                 | (10) |
| 5A) | Planck's quantum theory of radiation.                        | (5)  |
| 5B) | Fluorescence and Phosphorescence.                            | (5)  |
| 5C) | The structure of the Atom.                                   | (5)  |
| 5D) | Advantages of semiconductor devices over thermionic devices. | (5)  |
| 5E) | Photoelectric emission                                       | (5)  |
| 5F) | Impulsive forces.  | (5)  |
| 6A) | Kirchhoff's law.   | (2)  |
| 6B) | Newton first law of motion.                                  | (2)  |
| 6C) | Dimensional quantities with example.                         | (2)  |
| 6D) | Principle of homogeneity of dimensions.                      | (2)  |
| 6E) | Candela.   | (2)  |

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