

# 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-II/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 B.Sc. MEDICAL IMAGING TECHNOLOGY DEGREE EXAMINATION - FEBRUARY 2020  
SUBJECT: BMIT 101 - RADIATION PHYSICS  
(2016 RV SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Discuss the interaction of x ray with matter in detail. (20)
- 2) Describe in detail about filters and explain types of filters. (20)
- 3) Discuss the principles of image intensification in detail with labelled diagram. (10)
- 4) Discuss the purpose and principle of an autotransformer. How does it operate. (10)

5. Short note on:

- 5A) Airgap technique. (5)
- 5B) Circuit breakers. (5)
- 5C) Definition and types of grids. (5)
- 5D) Draw and label the rotating anode x ray tube. (5)
- 5E) Factors influencing quality of x ray. (5)
- 5F) High voltage circuit. (5)

6. Write note on:

- 6A) AC and DC power supply with examples. (2)
- 6B) Linear attenuation coefficient. (2)
- 6C) Radioactivity. (2)
- 6D) Define Rectification. (2)
- 6E) Resolution. (2)

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