



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER B.O.T./ B.Sc. M.L.T./ B.Sc. P.F.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 - DECEMBER 2018

SUBJECT : ANATOMY/ANATOMY I

(ANAT 101/ANAT 103/BOPT 101/BHIM 101/ BMRT 101)

(2016 RV/2016 SCHEME)

Saturday, December 01, 2018 (14.00 - 16.00)

Answer ALL questions.

Marks: 50

Duration: 120 mins.

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| 1) | Name the parts of the renal system. Describe the right and left kidneys in detail.
(4+6 = 10 marks) | (10) |
| 2) | Name the parts of the respiratory tract. Describe the nasal cavity in detail.
(4+6 = 10 marks) | (10) |
| 3A) | Right atrium of the heart | (5) |
| 3B) | Pancreas | (5) |
| 3C) | Testis | (5) |
| 3D) | Midbrain | (5) |
| 4A) | Classification (types) of epithelia | (2) |
| 4B) | Uterus | (2) |
| 4C) | Eyeball | (2) |
| 4D) | Thyroid gland | (2) |
| 4E) | Names of ventricles of the brain | (2) |

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Question Paper

Exam Date & Time: 08-Dec-2018 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER B.Sc. MEDICAL IMAGING TECHNOLOGY DEGREE EXAMINATION - DECEMBER 2018

SUBJECT: BMIT 101 - RADIATION PHYSICS

(2016 RV SCHEME)

Saturday, December 08, 2018 (14.00 - 17.00)

Answer ALL questions.

Draw the diagrams whenever required.

Marks: 100

Duration: 180 mins.

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|-----|---|------|
| 1A) | Describe in detail about three phase generators and explain each with appropriate diagrams. | (20) |
| 1B) | Discuss in detail about the working and construction of rotating anode X-ray tube with diagram. | (20) |
| 2A) | Viewing of fluoroscopic image | (10) |
| 2B) | Image characteristics | (10) |
| 3A) | Explain Characteristic curve | (5) |
| 3B) | Airgap technique | (5) |
| 3C) | Continuous and Characteristic X-ray spectrum | (5) |
| 3D) | Image intensifier tube | (5) |
| 3E) | Transformer and its types | (5) |
| 3F) | Switches and Fuses | (5) |
| 4A) | Types of filters | (2) |
| 4B) | Linear and mass attenuation coefficient | (2) |
| 4C) | Properties of X-rays | (2) |
| 4D) | Half life | (2) |
| 4E) | Filament circuit | (2) |

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Question Paper

Exam Date & Time: 12-Dec-2018 (02:00 PM - 04:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER B.Sc. MEDICAL IMAGING TECHNOLOGY DEGREE EXAMINATION - DECEMBER 2018
SUBJECT: BMIT 103T - RADIOGRAPHIC POSITIONING AND TECHNIQUES (PART 1)
(2016 RV SCHEME)
Wednesday, December 12, 2018 (14.00 - 16.00)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) Discuss in detail radiographic image quality. (10)
- 2) Explain in detail basic projections for demonstration of the knee joint. (10)

- 3) **Discuss the following:**
 - 3A) Taylor method (5)
 - 3B) Jones method (5)
 - 3C) Fisk method (5)

- 4) **Write short notes on:**
 - 4A) Peak Kilovoltage (3)
 - 4B) Knee AP weight bearing method (3)
 - 4C) Ankle stress method (3)
 - 4D) Hand lateral view (3)
 - 4E) Skeletal system (3)

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Question Paper

Exam Date & Time: 05-Dec-2018 (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.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 - DECEMBER 2018

SUBJECT : PHYS 101/BHIM 103/BRES 105/BMRT 103 - PHYSIOLOGY /PHYSIOLOGY - I
(2016 RV SCHEME/2016 SCHEME)

Wednesday, December 05, 2018 (14.00 - 16.00)

Answer ALL questions.

Marks: 50

Duration: 120 mins.

- 1A) Define cardiac output. Give its normal value. Mention three conditions where cardiac output is increased. (5)
- 1B) List three properties of cardiac muscle. Explain any one. (5)
- 2) **Describe erythropoiesis under the following headings:** (10)
a) Definition
b) Site of formation in adults
c) Stages of erythropoiesis
d) Developmental changes occurring during different stages
e) Two factors regulating erythropoiesis
- 3A) Describe the chemical regulation of respiration. (5)
- 3B) Draw a neat labeled diagram of neuromuscular junction. Describe the events that occur during neuromuscular transmission in the form of flow chart. (5)
- 3C) Draw a neat and labelled diagram of visual pathway and name the photoreceptors. (5)
- 3D) **Define the following:** (5)
a) Cyanosis
b) Hypoxia
c) Apnea
d) Dyspnea
e) Asphyxia
- 4A) Mention two functions of middle ear. (2)
- 4B) Write two differences between simple diffusion and active transport. (2)
- 4C) **Define:** (2)
a) Residual volume
b) Vital capacity
- 4D) Write two differences between myelinated and unmyelinated nerve fibres. (2)

