

MANIPAL UNIVERSITY

SECOND SEMESTER B.Sc. MIT DEGREE EXAMINATION – JUNE 2017

SUBJECT: ANATOMY (MIT 102)

(2014 SCHEME)

Friday, June 02, 2017

Time: 10.00-13.00 Hours.

Max. Marks: 80

1. Describe the brachial plexus under the following headings:

- 1A. Location and formation
- 1B. Branches
- 1C. Clinical anatomy

(8+8+4 = 20 marks)

2. Describe the arches of foot under the following headings:

- 2A. Classification and bones forming them
- 2B. Factors maintaining the arches
- 2C. Applied anatomy

(8+7+5 = 20 marks)

3. Write briefly on:

- 3A. Functional areas of cerebral hemisphere
- 3B. External features of spinal cord
- 3C. Internal capsule
- 3D. Circle of Willis
- 3E. Medulla oblongata

(5 marks × 5 = 25 marks)

4. Write short notes on:

- 4A. Hyaline cartilage
- 4B. Nasopharynx
- 4C. Testis
- 4D. Tongue
- 4E. Large intestine

(3 marks × 5 = 15 marks)



MANIPAL UNIVERSITY**SECOND SEMESTER B.Sc. M.I.T./BACHELOR OF CLINICAL OPTOMETRY
DEGREE EXAMINATION – JUNE 2017****SUBJECT: MIT 104 PHYSIOLOGY/ BOP 102 GENERAL PHYSIOLOGY
(2014 SCHEME/2012 BATCH)**

Monday, June 05, 2017

Time: 10:00 – 11:30 Hours

Maximum Marks: 40

- ✍ **Answer ALL questions.**
- ✍ **Draw diagrams wherever necessary.**

1. Essay questions:

- 1A. Draw and label a normal electrocardiogram (ECG) from limb lead II. Mention the causes for different waves. Give two uses of ECG.
- 1B. In the form of a flow chart, describe the events that occur during neuromuscular transmission in skeletal muscle.
- 1C. Write the pathway for intrinsic mechanism of blood clotting.
- 1D. Draw a neat labeled diagram of oxygen hemoglobin dissociation curve. Mention any two factors that shift the curve to the right.

(5 marks × 4 = 20 marks)

2. Write short answers for the following:

- 2A. Classify body fluid compartments.
- 2B. Define resting membrane potential. Give its normal value in a neuron.
- 2C. Name the hormones secreted by adrenal cortex and adrenal medulla.
- 2D. List two ascending tracts in the spinal cord.
- 2E. List any two functions of placenta.
- 2F. Mention the components of gastric juice.
- 2G. Name the receptors for vision. Where are they located?
- 2H. Write any two features of Parkinson's disease.
- 2I. Mention the normal GFR value. Mention any two factors affecting GFR.
- 2J. Write any two differences between first and second heart sounds.

(2 marks × 10 = 20 marks)



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**SECOND SEMESTER B.Sc. MIT/BACHELOR OF OPTOMETRY/B.Sc. MLT/FIRST YEAR M.Sc. NMT
DEGREE EXAMINATION – JUNE 2017**

**SUBJECT: BIOCHEMISTRY (MIT 106) / BASIC BIOCHEMISTRY (BOP 104) / GENERAL
BIOCHEMISTRY (BLT 104)/PAPER II: BIOCHEMISTRY (NR)**

Wednesday, June 07, 2017

Time: 10.00-11.30 Hours

Max. Marks: 40

✍ **Answer ALL the questions:**

✍ **Draw diagrams and flow charts wherever appropriate.**

1. Write in detail the reactions of TCA cycle.

(8 marks)

2. Discuss the digestion and absorption of lipids in the intestine.

(6 marks)

3. **Write short notes on:**

3A. Absorption and transport of iron

3B. Lactose intolerance

3C. Nitrogen balance

3D. Dietary fibers

(4 marks × 4 = 16 marks)

4. **Answer the following:**

4A. Give FOUR differences between DNA and RNA.

4B. Mention the factors affecting the absorption of calcium.

4C. Name TWO important compounds each derived from glycine and phenylalanine.

4D. Define transamination with ONE example.

4E. Name TWO inhibitors of electron transport chain with their site of action.

(2 marks × 5 = 10 marks)



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MANIPAL UNIVERSITY

SECOND SEMESTER B.Sc. M.I.T. DEGREE EXAMINATION – JUNE 2017

SUBJECT: MIT 108T: IMAGING PHYSICS AND RADIOGRAPHIC POSITIONING (PART 2)
(2014 SCHEME)

Friday, June 09, 2017

Time: 10.00-13.00 Hrs.

Max. Marks: 80

- ✍ Answer ALL the questions.
- ✍ Draw diagrams wherever required.

1. **Explain in detail:**

- 1A. Explain Ultrasound artefacts, types, causes and their remedies.
- 1B. Draw a labelled diagram of cervical vertebra. Describe the basic projections of cervical vertebra.

(15 marks × 2 = 30 marks)

2. **Write short notes on the following:**

- 2A. Ultrasound probes
- 2B. Ultrasound gray scale imaging
- 2C. Colour doppler
- 2D. Oblique view of thoracic spine
- 2E. Submento vertical view of skull
- 2F. Lateral oblique view of mastoid

(5 marks × 6 = 30 marks)

3. **Discuss the following:**

- 3A. Properties of ultrasound
- 3B. Doppler principle
- 3C. KUB x ray
- 3D. Lateral view of lumbar spine

(5 marks × 4 = 20 marks)

