

MANIPAL ACADEMY OF HIGHER EDUCATION**FIRST SEMESTER M.Sc. MEDICAL (ANATOMY, PHYSIOLOGY, BIOCHEMISTRY,
PHARMACOLOGY, MICROBIOLOGY) DEGREE EXAMINATION – MARCH 2021****SUBJECT: BASIC SCIENCES – COMMON CORE 1 (MCC 601)**

Monday, March 22, 2021

Time: 14:00 – 16:30 Hrs.

Maximum Marks: 50

- ✍ Answer Section “A”, Section “B” and Section “C” in THREE separate answer books.
✍ All questions are compulsory.
✍ Illustrate your answers with diagrams wherever appropriate.

SECTION “A” (ANATOMY) : 20 MARKS

1. Enumerate the parts of urinary system. Describe the kidney in detail. (10 marks)
2. Write short notes on:
- 2A. Collateral circulation
- 2B. Cartilaginous joints (5 marks × 2 = 10 marks)

SECTION “B” (PHYSIOLOGY) : 15 MARKS

- 1A. Draw a labelled diagram of reflex arc. Classify reflexes.
- 1B. Name the refractory errors of eye. (3+2 = 5 marks)
- 2A. Draw a labelled diagram of limb lead II ECG recording. Give the cause for each wave.
- 2B. Give the normal WBC count. Name different types of WBCs. (3+2 = 5 marks)
- 3A. Give the normal value of total plasma calcium level in blood. Name the hormones involved in calcium homeostasis.
- 3B. Name the primary and accessory muscles of inspiration. (3+2 = 5 marks)

SECTION “C” (BIOCHEMISTRY) : 15 MARKS

1. Describe the structure of immunoglobulins. Name the different classes of immunoglobulins and their functions.
2. What are enzymes? Describe the factors affecting the velocity of an enzyme catalyzed reaction.
3. Describe the functions and deficiency symptoms of vitamin D. (5 marks × 3 = 15 marks)



MANIPAL ACADEMY OF HIGHER EDUCATION**FIRST SEMESTER M.Sc. (MEDICAL ANATOMY) DEGREE EXAMINATION – MARCH 2021****SUBJECT: UPPER LIMB AND LOWER LIMBS (MAN 603)**

Tuesday, March 23, 2021

Time: 14:00 – 16:30 Hrs.

Maximum Marks: 50

- ✍ All questions are compulsory.
✍ Illustrate your answers with diagrams wherever appropriate.

1. Describe the Radial nerve under the following:

- 1A. Origin
1B. Course
1C. Branches and distribution
1D. Applied Aspects

(1+2+4+3 = 10 marks)

2. Describe the venous drainage of lower limb. Discuss applied aspects.

(10 marks)

3. Write short notes on:

- 3A. 1st carpometacarpal joint
3B. Common peroneal nerve
3C. Deltoid muscle
3D. Extensor retinaculum of wrist
3E. Adductor canal
3F. Piriformis muscle

(5 marks × 6 = 30 marks)



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MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER M.Sc. (MEDICAL ANATOMY) DEGREE EXAMINATION – MARCH 2021

SUBJECT: GENERAL EMBRYOLOGY AND GENERAL HISTOLOGY (MAN 605)

Wednesday, March 24, 2021

Time: 14.00 – 16.30 Hrs.

Max. Marks: 50

1. Describe the formation of the intraembryonic mesoderm. Briefly explain the fate of this mesoderm.
(5+5 = 10 marks)

2. Describe the microarchitecture of the compact bone. Briefly explain the factors influencing the composition of the bone.
(5+5 = 10 marks)

3. **Short Notes:**
 - 3A. Neural tube defects
 - 3B. Explain the formation of the placental villi
 - 3C. Fertilization
 - 3D. List the histological differences in the lymphoid tissues
 - 3E. Histology of the hyaline cartilage
 - 3F. Cilia

(5 marks × 6 = 30 marks)

