

## MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER M.Sc. MEDICAL (ANATOMY, PHYSIOLOGY, BIOCHEMISTRY, PHARMACOLOGY, MICROBIOLOGY) DEGREE EXAMINATION – JANUARY 2020

SUBJECT: BASIC SCIENCES – COMMON CORE 1 (MCC 601)

Monday, January 13, 2020

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 neatly drawn and correctly labeled diagrams wherever necessary.

### SECTION “A” (ANATOMY) : 20 MARKS

1. Enumerate the parts of gastrointestinal tract. Describe the stomach in detail.  
(4+6 = 10 marks)
2. Write briefly on:
  - 2A. Name the arteries of upper and lower limb.
  - 2B. Name the parts of long bone. Describe its blood supply.  
(5 marks × 2 = 10 marks)

### SECTION “B” (PHYSIOLOGY) : 15 MARKS

- 1A. Name the hormones produced from posterior pituitary. List the actions of each
- 1B. Explain how oxygen is transported from lungs to tissues? List the factors which shift the oxygen haemoglobin dissociation curve to right. Add a note on hypoxic hypoxia.  
(5+5 = 10 marks)
2. With a diagram explain the changes occurring in the endometrium during menstrual cycle.  
(5 marks)

### SECTION “C” (BIOCHEMISTRY) : 15 MARKS

✍ Answer the following:

1. Explain competitive inhibition of enzymes giving suitable examples  
(5 marks)
- 2A. Describe structure and function of tRNA.
- 2B. Classify proteins based on their functions  
(2½ marks × 2 = 5 marks)

- 3A. Define essential fatty acids and give two examples.
- 3B. Name the deficiency diseases of vitamin C and niacin
- 3C. Explain the cause for oedema in kwashiorkor
- 3D. Write the normal serum calcium level. Name 2 hormones that regulate calcium level
- 3E. Write an example of mucopolysaccharide and mention its function

(1 mark × 5 = 5 marks)



**MANIPAL ACADEMY OF HIGHER EDUCATION****FIRST SEMESTER M.Sc. (MEDICAL ANATOMY) DEGREE EXAMINATION – JANUARY 2020****SUBJECT: UPPER LIMB AND LOWER LIMB (MAN 603)**

Tuesday, January 14, 2020

Time: 14:00 – 16:30 Hrs.

Maximum Marks: 50

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

**1. Explain the shoulder joint under the following:**

- 1A. Type
- 1B. Articulating surfaces
- 1C. Ligaments
- 1D. Movements with muscles producing them

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

**2. Describe the Sciatic nerve under the following:**

- 2A. Origin
- 2B. Course
- 2C. Distribution
- 2D. Applied aspects

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

**3. Write short notes on:**

- 3A. Superficial palmar arch
- 3B. Popliteus
- 3C. Femoral artery
- 3D. Ulnar nerve
- 3E. Biceps brachii
- 3F. Great saphenous vein

(5 marks × 6 = 30 marks)



Reg. No.																			
----------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

## MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER M.Sc. (MEDICAL ANATOMY) DEGREE EXAMINATION – JANUARY 2020

SUBJECT: GENERAL EMBRYOLOGY AND GENERAL HISTOLOGY (MAN 605)

Wednesday, January 15, 2020

Time: 14.00 – 16.30 Hrs.

Max. Marks: 50

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

1. Describe the event of fertilization in detail.

(10 marks)

2. Describe the microscopic structure of a skeletal muscle in detail.

(10 marks)

3. Write briefly on:

3A. Osteoblasts

3B. Notochord

3C. Microscopic structure of hyaline cartilage

3D. Corpus luteum

3E. Stratified squamous non-keratinized epithelium

3F. Neural crest cells

(5 marks × 6 = 30 marks)

