

**MANIPAL ACADEMY OF HIGHER EDUCATION**

**FIRST SEMESTER M.Sc. MEDICAL (ANATOMY, PHYSIOLOGY, BIOCHEMISTRY,  
PHARMACOLOGY, MICROBIOLOGY) DEGREE EXAMINATION – FEBRUARY 2022**

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

Monday, February 21, 2022

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. Name the parts of the gastro intestinal tract. Describe the stomach in detail.  
(4+6 = 10 marks)
2. Write briefly on:
  - 2A. Types of epithelium
  - 2B. Spinal cord
 (5 marks × 2 = 10 marks)

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

- 1A. With the help of diagram enumerate the stages of erythropoiesis.
- 1B. Give the cause and any two features of cretinism.
- 1C. Name the different types of neuroglia.  
(2+(1+1)+1 = 5 marks)
- 2A. List any four functions of saliva.
- 2B. What is Myopia? How it can be corrected?
- 2C. Give the cause and any two symptoms of Parkinsonism.  
(1+2+2 = 5 marks)
- 3A. Name any four properties of cardiac muscle.
- 3B. List any two factors needed for spermatogenesis.
- 3C. Define Glomerular Filtration Rate (GFR). Give its normal value.  
(2+1+(1+1) = 5 marks)

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

1. Explain competitive and non-competitive types of enzyme inhibitions with examples.  
(5 marks)
2. Classify lipoproteins and write their functions. Name any two special products formed from cholesterol.  
(4+1 = 5 marks)
3. Describe the structure of starch and glycogen. Write two functions of mucopolysaccharides.  
(4+1 = 5 marks)



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FIRST SEMESTER M.Sc. (MEDICAL PHARMACOLOGY) DEGREE EXAMINATION – FEBRUARY 2022  
SUBJECT: GENERAL PHARMACOLOGY (MPH 603)

Tuesday, February 22, 2022

Time: 14:00 – 16:30 Hrs.

Maximum Marks: 50

✍ Answer ALL the questions.

✍ Long Essays:

1. Enumerate the enteral routes of drug administration. Write the advantages and disadvantages of each of them.

(10 marks)

2. Define 'receptor'. Describe any two receptor families involved in drug action.

(10 marks)

3. Write short notes on:

3A. Drug tolerance

3B. Therapeutic index

3C. Drug synergism

3D. Prodrug

3E. Kinetics of elimination

3F. Photosensitivity

(5 marks × 6 = 30 marks)



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FIRST SEMESTER M.Sc. (MEDICAL PHARMACOLOGY) DEGREE EXAMINATION – FEBRUARY 2022  
SUBJECT: ENDOCRINES+BLOOD (MPH 605)

Wednesday, February 23, 2022

Time: 14:00 – 16:30 Hrs.

Maximum Marks: 50

✍ Answer ALL the questions.

✍ Long Essays:

1. Classify progestins with suitable examples. Explain the mechanism of action, therapeutics uses and adverse effects of progestins.

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

2. Explain the mechanism of action of warfarin. How is warfarin dose regulated? Explain the important adverse effect and its treatment. Mention two clinically relevant drug interactions with warfarin.

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

3. Write short notes on:

3A. Name two recombinant tissue plasminogen activators. Explain their therapeutic uses

3B. Thioamides (Antithyroid drugs)

3C. Recombinant human erythropoietin

3D. Insulin analogs

3E. Explain the uses of glucocorticoids

3F. Explain the uses and adverse effects of oxytocin

(5 marks × 6 = 30 marks)

