

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)



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MANIPAL ACADEMY OF HIGHER EDUCATION
FIRST SEMESTER M.Sc. (MEDICAL PHARMACOLOGY)
DEGREE EXAMINATION – JANUARY 2020

SUBJECT: GENERAL PHARMACOLOGY (MPH 603)

Tuesday, January 14, 2020

Time: 14:00 – 16:30 Hrs.

Maximum Marks: 50

✍ **Answer ALL the questions.**

✍ **Long Essays:**

1. Define the terms 'Bioavailability' and 'Bioequivalence'. Explain the factors affecting bioavailability.

(2+2+6 = 10 marks)

2. Enumerate four super-family of receptors with suitable examples for each. Write briefly on 'Regulation of receptors' and "Non-receptor mediated drug action".

(4+3+3 = 10 marks)

3. **Write short notes on:**

3A. Redistribution of drugs

3B. Adverse drug reactions

3C. Drug synergism

3D. Methods to prolong the duration of drug action

3E. Microsomal enzyme induction

3F. Sources of drugs

(5 marks × 6 = 30 marks)



MANIPAL ACADEMY OF HIGHER EDUCATION
FIRST SEMESTER M.Sc. (MEDICAL PHARMACOLOGY)
DEGREE EXAMINATION – JANUARY 2020

SUBJECT: ENDOCRINES+BLOOD (MPH 605)

Wednesday, January 15, 2020

Time: 14:00 – 16:30 Hrs.

Maximum Marks: 50

✍ **Answer ALL the questions.**

✍ **Long Essays:**

1. Classify oral antidiabetic drugs with suitable examples. Explain the mechanism of action of any two.

(6+2+2 = 10 marks)

2. Classify systemic corticosteroids based on the duration of action with suitable examples. Discuss the uses and adverse effects of corticosteroids.

(3+3+4 = 10 marks)

3. **Answer the following:**

3A. Write briefly on radioactive iodine.

3B. Compare and contrast: heparin and enoxaparin.

3C. Write the mechanism of action and adverse effects of combined oral contraceptive pill

3D. Mention oral and parenteral iron preparations. What are the indications of parenteral iron therapy?

3E. Write briefly on uterine relaxants.

3F. Enumerate fibrinolytic drugs. Explain their uses. Mention the contraindications to fibrinolytic therapy.

(5 marks × 6 = 30 marks)

