

School: School of Medicine and Allied Health Sciences	Level: Bachelor	
Program: Pharmacy	Year/Part: II/II	Superintendent's Sign: .....
Subject: Pharmacology II (BP402)		Code No. ....

<b>GROUP A (Multiple-Choice Questions)</b>	<b>[10×1=10]</b>	<b>Maximum Time: 20 Minutes</b>
<i>i. This group contains 10 multiple-choice questions (MCQs).</i> <i>ii. Answers must be marked on the MCQ Answer Sheet.</i> <i>iii. You may use the main answer sheet for rough work.</i> <i>iv. Marks will not be awarded for answers with cutting, erasing, overwriting, or multiple shaded options.</i> <i>v. The MCQ question paper must be returned along with the MCQ answer sheet.</i>		Code No.:

- Which of the following heart valves prevents backflow of blood from the left ventricle to the left atrium?
  - Pulmonary valve
  - Tricuspid valve
  - Mitral valve
  - Aortic valve
- Which of the following is the primary cause of gout?
  - Calcium pyrophosphate deposition
  - Hyperuricemia leading to uric acid crystal deposition
  - Excessive calcium absorption
  - Vitamin D deficiency
- Which of the following is the pacemaker of the heart?
  - Atrioventricular (AV) node
  - Sinoatrial (SA) node
  - Bundle of His
  - Purkinje fibers
- What is the normal resting heart rate range in adults?
  - 40-60 beats per minute
  - 60-100 beats per minute
  - 100-120 beats per minute
  - 120-140 beats per minute
- Which blood vessel carries oxygenated blood from the lungs to the heart?
  - Pulmonary artery
  - Pulmonary vein
  - Aorta
  - Superior vena cava
- Which type of blood vessel has the thickest walls due to high pressure?
  - Arteries
  - Veins
  - Capillaries
  - Venules
- Which of the following is a Thrombolytic?
  - Hydrochlorothiazide
  - Spironolactone
  - Streptokinase
  - Mannitol
- Thiazide diuretics primarily act on which part of the nephron?
  - Proximal convoluted tubule
  - Loop of Henle
  - Distal convoluted tubule
  - Collecting duct
- Which diuretic is known as a potassium-sparing diuretic?
  - Bumetanide
  - Amiloride
  - Hydrochlorothiazide
  - Acetazolamide
- Which of the following is considered a hematinic agent?
  - Insulin
  - Folic acid
  - Cortisol
  - Adrenaline

### MCQ Answer Sheet

Marks Secured: \_\_\_\_\_

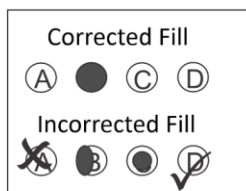
In Words: \_\_\_\_\_

Examiner's Sign: \_\_\_\_\_ Date: \_\_\_\_\_

Scrutinizer's Marks: \_\_\_\_\_

In Words: \_\_\_\_\_

Scrutinizer's Sign: \_\_\_\_\_ Date: \_\_\_\_\_



1. (A) (B) (C) (D)	6. (A) (B) (C) (D)
2. (A) (B) (C) (D)	7. (A) (B) (C) (D)
3. (A) (B) (C) (D)	8. (A) (B) (C) (D)
4. (A) (B) (C) (D)	9. (A) (B) (C) (D)
5. (A) (B) (C) (D)	10. (A) (B) (C) (D)

Manmohan Technical University  
Office of the Controller of Examinations  
Exam Year: 2082, Jestha **(Model Question)**

School: School of Medicine and Allied Health Sciences	Level: Bachelor	Time: 3 Hours
Program: Pharmacy	Year/Part: II/II	Full Marks: 50
<b>Subject: Pharmacology II (BP402)</b>		Pass Marks: 25

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ The figures in the margin indicate Full Marks.
- ✓ Assume suitable data if necessary.

**GROUP A** (Multiple-Choice Questions are provided on separate sheet)

[10×1=10]

**GROUP B** (Problem Based Question)

[1×10=10]

1. A 58-year-old male patient presents with a history of stable angina, newly diagnosed hypertension, and hyperlipidemia. His current medications include aspirin and a statin. The patient is a smoker and has a family history of cardiovascular disease. Based on this scenario, address the following:
  - a. Explain the rationale for using combination therapy in the management of stable angina, including the mechanisms of action of the drug classes involved and their synergistic effects in improving symptoms and reducing cardiovascular risk.
  - b. Identify and justify the first-line pharmacological treatment for this patient's hypertension, considering guideline-recommended drug classes, their mechanisms of action, and their suitability given the patient's comorbidities.
  - c. Discuss the role of omega-3 fatty acids in managing hyperlipidemia, including their mechanism of action, evidence for efficacy, and their place in therapy relative to statins and lifestyle modifications.

Provide a comprehensive, evidence-based response, integrating clinical reasoning and patient-specific factors to support your recommendations. [4 + 3 + 3]

**GROUP C** (Long Answer Questions - Attempt Any Four)

[4×5=20]

2. Describe the mechanism of action, therapeutic indications, adverse effects, and contraindications of any one oral anticoagulants.
3. Discuss the pharmacodynamics of a potent diuretic of your choice, including its mechanism of action, effects on the body, and its use in disease management.
4. Provide a concise overview of folic acid and vitamin B12, including their clinical significance, deficiency states, and therapeutic uses.
5. Explain the pharmacological management of migraine, including the drug classes used for acute treatment and prophylaxis, their mechanisms of action, and considerations for patient care.
6. Classify the major drug classes used in the treatment of hypertension, and briefly describe their mechanisms of action of any one, clinical uses, and key considerations for each class.

**GROUP D** (Short Answer Questions - Attempt Any Five)

[5×2=10]

7. Briefly describe erythropoietin.
8. Briefly describe the mechanism of action of anti-rheumatic drugs.
9. Summarize the pharmacokinetic properties of cholestyramine.
10. What are the clinical indications for montelukast?
11. Provide a concise classification of anti-asthmatic drugs.
12. Explain the mechanism of action of centrally acting antihypertensive drugs.