



**DBH-201722**

Seat No. \_\_\_\_\_

**Second Professional M. B. B. S. Examination**

**May - 2022**

**Pharmacology : Paper - 1**

*(New Course)*

Time : 3 Hours]

[Total Marks : 100

- Instructions :** (1) All questions are compulsory.  
(2) The number on the right side indicates full marks.  
(3) Draw diagrams where necessary.  
(4) Write Section I and Section II on separate answer sheets

**SECTION-I**

- 1 Answer the questions based on the following case scenario: **12**  
A lady aged 55 years was brought at night to the hospital emergency with severe breathlessness and wheezing. Chest auscultation revealed marked bronchoconstriction. She was managed with 100% O<sub>2</sub> inhalation and nebulized salbutamol + ipratropium bromide. The asthmatic attack was controlled in about, 6 hours. Next day, history taking revealed that she was having mild episodic asthma off and on, but never had such a severe attack. Day before she had visited an ophthalmologist for visual difficulty and, frontal headache. The intraocular pressure was measured to be 24 and 25 mm Hg in right and left eye respectively. She was prescribed: Timolol 0.5% eye drops in each eye twice a day.
- What is the probable diagnosis made by an ophthalmologist? Why?
  - Why timolol is prescribed to her?
  - What is the most likely explanation for the precipitation of severe attack of asthma?
  - How could such a complication be avoided?

- 2 Write in detail on any **TWO** of the following: 12
- (a) Pharmacotherapy of myasthenia gravis
  - (b) Pharmacovigilance
  - (c) Dantrolene sodium
- 3 Explain the pharmacological basis for the use of any **FOUR** of the following: 12
- (a) Succinyleholine in endotracheal intubation.
  - (b) Tamsulosin in benign prostatic hypertrophy.
  - (c) Adrenaline in anaphylactic shock.
  - (d) Pralidoxime in organophosphorus poisoning.
  - (e) Salbutamol in bronchial asthma.
- 4 Compare and contrast any **TWO** of the following: 4
- (a) First order kinetics and zero order kinetics
  - (b) Phentolamine and prazosin
  - (c) Labetalol and metoprolol
- 5 Answer briefly: 6
- (a) What is pharmacovigilance?
  - (b) Enumerate four factors which can modify drug action?
  - (c) What is first pass metabolism? Name two drugs having high first pass metabolism.
  - (d) What is vasomotor reversal of Dale?
  - (e) Name two centrally acting skeletal muscle relaxants.
  - (f) Name four cardio-selective beta blockers ?

## SECTION - II

- 6 Answer the questions based on the following case scenario: 12
- A 72 years old man presents with swelling over ankle and feet, also noticeable over face in the morning, shortness of breath and palpitation on walking -100 m, weakness, fatigue and cough at night. The pulse is 110/min, BP 114/ 78 mm Hg, there is pitting edema over feet, liver is enlarged 2 cm below costal margin, neck veins are filled upto 3 cm above clavicle, crepitations are heard at the base of lungs, apex beat is in the 6th intercostal space and heart sounds are muffled. Chest X-ray and echocardiography shows enlarged cardiac shadow and an ejection fraction (EF) of 28%. A diagnosis of moderate grade heart failure due to dilated

cardiomyopathy with reduced EF is made. The doctor prescribed bed rest, salt restriction and: Tab enalapril 5 mg twice a day Tab furosemide 40 mg in the morning.

- (a) Can the patient be prescribed any other drug to hasten relief of symptoms? If so, Which drug and in what dosage?
- (b) Should the dose of enalapril be changed over time or should it be withdrawn, if so when?
- (c) Should a beta-adrenergic blocking drug be added to the treatment regimen concurrently?

- 7 Write in detail on any **TWO** of the following: 12
- (a) Low molecular weight heparin
  - (b) Spironolactone
  - (c) Pharmacotherapy of acute angina pectoris
- 8 Write on any **FOUR** of the following: 16
- (a) Pharmacological basis for the use of sumatriptan in migraine.
  - (b) Pharmacological basis for the use of adenosine in Paroxysmal Supra Ventricular Tachycardia.
  - (c) Compare and contrast: Heparin and warfarin.
  - (d) Therapeutic uses of fibrinolytics.
  - (e) Inhalational corticosteroids.
- 9 Write short notes on any **TWO** of the following: 4
- (a) Autonomy
  - (b) Non-maleficence
  - (c) Role of physician in healthcare system
- 10 Answer briefly: 6
- (a) Name two cough suppressants.
  - (b) Name two drugs which are safe in pregnancy with hypertension.
  - (c) Name two oral and two parenteral iron preparations.
  - (d) Mention two non-cardiac uses of nitrates.
  - (e) What is omalizumab? Mention its therapeutic indication.
  - (f) Write mechanism of action of gemfibrozil as hypolipidemic agent.