

03/24

The West Bengal University of Health Sciences
MBBS 2nd Professional Examination (New Regulation) July-August 2024

Subject: Pharmacology
 Paper: I

Full Marks: 100
 Time: 3 hours

Attempt all questions. The figures in the margin indicate full marks.

1. a) A 48 yrs old male with uncontrolled high blood pressure is presented in the cardiology OPD with complaints of breathlessness when lying down, palpitation, cough with pink blood tinged mucus and swelling of both legs. Echocardiography reveals dilated ventricles with left ventricular ejection fraction 30%.

5+(3+4+3)

- i) Name the drugs effective for this condition.
- ii) Write the uses, adverse effects and contraindications of cardiac glycosides.

b) A 54 old lady was brought to the hospital emergency with severe breathlessness and wheezing. Chest auscultation revealed marked bronchoconstriction. The asthmatic attack was controlled in 6 hrs with 100% O₂ inhalation and nebulization with salbutamol and ipratropium bromide. History revealed that she suffers from mild episodic asthma. A day before this incidence she was prescribed timolol eye drop 0.5% twice daily for each eye for raised intraocular pressure (24 mm of Hg in left and 26 mm of Hg in right eye).

2+6+5+2

- i) What is the most likely explanation for this acute severe attack of asthma?
- ii) Name the drugs, their mechanism of actions and adverse effect that can be prescribed for glaucoma to prevent such complication in future.
- iii) How will you manage case of acute congestive glaucoma?
- iv) Name one anti cholinergic drug that cannot be given to this patient and why?

2. a) A middle aged gardener has been rushed to the emergency ward with loss of consciousness following an insect bite. He is diagnosed as having anaphylactic shock.

5+5

- i. What types of medications are used to treat this case and why?
- ii. Which drug can reverse anaphylaxis and how?

b) Write down the indications of parenteral iron therapy. Mention various preparations of parenteral iron indicating advantages and disadvantages.

4+3+3

c) Write down the mechanism of action, uses, adverse effects and contraindications of unfractionated heparin. What is the advantage of LMW heparin over unfractionated heparin?

10

3. Write short notes on following:

2 x 5

- a) Cardiac glycosides.
- b) Good clinical practice and international committee for harmonization.

4. Explain the following statements:

5 x 4

- a) Ambroxol is used as mucolytic.
- b) Chlorthalidone is preferred diuretic for hypertension.
- c) Vitamin K is the antidote to warfarin induced bleeding.
- d) Spironolactone is used in cirrhotic edema.
- e) Inhalation route is preferred for pulmonary drug delivery.

5. Choose the correct option for each of the following:

10 x 1

i) The antianginal drug which acts by inhibiting mitochondrial long chain 3 ketoacyl-CoA enzyme in fatty acid oxidation pathway is:

- a) Ivabradine b) Dipyridamole c) Nicorandil d) Trimetazidine

ii) Tolvaptan is used for:

- a) SIADH. b) Central Diabetes Insipidus
- c) Von willebrand disease d) Catecholamine resistant shock

iii) A partial agonist can antagonize the effects of a full agonist because it has :

- a) High affinity but low intrinsic activity b) Low affinity but intrinsic activity
- c) No affinity but intrinsic activity d) High affinity but no intrinsic activity

iv) All are treatment options in myasthenia gravis except:

- a) Ambenonium b) Penicillamine c) Azathioprine d) Prednisolone

v) The following attributes of a drug tends to reduce its volume of distribution

- a) High lipid solubility b) Low ionization at physiological PH values
- c) High plasma protein binding d) High tissue binding

vi) All of the following drugs in higher therapeutic doses are nephrotoxic except:

- a) Amphotericin b) Lithium c) Clindamycin d) Atorvastatin

vii) Calcium disodium edentate is very effective in poisoning by:

- a) Arsenic b) Mercury c) Lead d) Bismuth

viii) Plasma level of Vitamin A may be significantly affected by:

- a) Vitamin D b) OCP c) Cephalosporin d) Aspirin

ix) The following cotransmitter is most probably involved in mediating NANC relaxation of the gut:

- a) Nitrous oxide b) Epinephrine c) Neuropeptide Y d) Kallidin

x) Pharmacovigilance is included in the following phase of clinical trial:

- a) Phase 1 b) Phase 2 c) Phase 3 d) Phase 4