

03/23

The West Bengal University of Health Sciences
MBBS 2nd Professional Examination (New Regulation) March - April 2023

Subject: Pharmacology
Paper: I

Full Marks: 100
Time: 3 hours

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

1. a) A 22 year old female with an unremarkable past medical history presents with fever, sore throat, and a tender cervical lymphadenopathy. She is diagnosed with streptococcal group A pharyngitis and is treated with IM penicillin. Within a few minutes of the injection, the patient develops dyspnoea, tachycardia, hypotension, and is noted to have wheezing on examination. She also complains of dysphagia. 2+3+3+5+2
- i) What is your diagnosis of the given case-scenario.
ii) Which drug will you use in this case and in what dose?
iii) Mention the route of administration that you will prefer in this case and why?
iv) Mention the effect of the drug you choose on the patient's vascular and respiratory system and also mention the receptors mediating such responses. neprilys
- b) A 60 year male patient was admitted in hospital with shortness of breath, swelling of legs, pallor and palpitation. On careful examination, he was diagnosed to be a case of heart failure.
- i) Enumerate the drug useful to treat heart failure with their rationality.
ii) Outline the management of acute heart failure. 6+4+2+3
iii) What is ARNI and its role in heart failure?
2. a) Enumerate six classes of drugs that act on the Renin-Angiotensin Aldosterone Axis. State four clinical conditions where ACE Inhibitors may be used. 6+4
- b) Classify bronchodilator agents with examples. State the adverse effects of inhaled steroids therapy. What drugs would you prescribe in a patient with seasonal asthma? Levofloxacin 5+3+2
- c) Once megaloblastic anemia is identified, why it is important to measure serum concentration of both folic acid and cobalamin? What should be the treatment regimen for a patient of pernicious anemia? 5+5
3. Write short notes on following: 2 x 5
- a) Pharmacovigilance.
b) Rights of patient.
4. Explain the following statements: 5 x 4
- a) Edrophonium may be used to differentiate between cholinergic and myasthenic crisis.
b) Low dose Aspirin act as an antiplatelet drug in Acute Myocardial Infarction.
c) Eliciting medical history is important for rational therapeutics.
d) Complications of long-term thiazide diuretic therapy.
e) Addition of Ezetimibe to Atorvastatin is therapeutically beneficial.

P.T.O

10 x 1

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

- i) Which two parameters are required for renal clearance ?
 - a) Elimination and T_{1/2}
 - b) T_{1/2} and plasma concentration
 - c) T_{1/2} and volume of distribution
 - ☒ d) Elimination and plasma concentration
- ii) A patient presents with nephrotic syndrome and hypoalbuminemia. Protein binding of which drug is not affected in such patient.
 - a) Tolbutamide
 - ☒ b) Morphine
 - c) Diazepam
 - d) Valproate
- iii) Drug matched correct mechanism of action ?
 - a) Timolol – increase uroscleral outflow
 - ☒ b) Pilocarpine – increase trabecular outflow
 - c) Latanoprost – decrease production of aqueous outflow
 - d) Betaxolol – increase trabecular outflow
- iv) Clofibrate, a lipid lowering agent inhibits both cholesterol and triglyceride synthesis by -
 - a) Inhibiting HMG CoA reductase
 - b) Binding to bile acids and preventing its reabsorption
 - c) Inhibiting VLDL production
 - ☒ d) Activating lipoprotein lipase, resulting in VLDL degradation
- v) Which of the following colloid solutions has proven thromboprophylactic (antithrombotic) effect
 - a) Gelatin
 - b) Dextran 40
 - ☒ c) Dextran 100
 - d) Hetastarch
- vi) You see that cardiologist prescribe a non-selective beta blocker for a patient with congestive heart failure. He mentions that the drug has several beneficial effects. Identify the drug.
 - ☒ a) Propranolol
 - b) Pindolol
 - c) Metoprolol
 - d) Carvedilol
- vii) Phenoxybenzamine is indicated in the management of which of the following conditions?
 - ☒ a) Pheochromocytoma
 - b) Essential hypertension
 - c) Erectile dysfunction
 - d) All of the above
- viii) Which of the following would NOT be used as a topical vasoconstrictor for a patient with epistaxis (nasal pack soaked in drug)?
 - a) Phenylephrine
 - b) Epinephrine
 - ☒ c) Oxymentazoline
 - d) Isoprenaline
- ix) Intravenous mannitol is used in?
 - a) Pulmonary edema
 - b) Congestive cardiac failure
 - c) Acute kidney injury with anemia
 - ☒ d) Glaucoma
- x) The free fraction of a drug is responsible for its action. In a case of AMI when Acute Phase Reactants increase, levels of α_1 acid glycoprotein may increase. As a result, therapeutic effect of
 - a) Weakly acidic drugs may increase
 - ☒ b) Weakly basic drugs may decrease
 - c) Weakly acidic drugs may decrease
 - d) Weakly basic drugs may increase