

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.
- 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. 6+4+2+3
 - i) Enumerate the drug useful to treat heart failure with their rationality.
 - ii) Outline the management of acute heart failure.
 - 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? Levosalbutamol 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