

Total No. of printed pages = 4

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2023

B.Pharm. 5th Semester End-Term Examination (Regular)

MEDICINAL CHEMISTRY – II

Full Marks – 75

Time – Three hours

The figures in the margin indicate full marks for the questions.

1. Answer *all* the questions : (20 × 1 = 20)
- (i) Which of the following antihistamines also have antiemetic action
- (a) Promethazine (b) Cetrizine
(c) Loratidine (d) Pyrilamine
- (ii) Omeprazole is
- (a) Gastric acid inhibitor (b) Proton pump inhibitor
(c) Mast cell stabilizer (d) H1 receptor antagonist
- (iii) The antianginal drug that inhibits phosphodiesterase is
- (a) Nifedipine (b) Isosorbide dinitrate
(c) Verapamil (d) Both (a) and (b)
- (iv) Mechanism of action of nitrate is
- (a) Stimulates guanylate cyclase
(b) Beta-Blocking
(c) Calcium channel blocking
(d) Inhibits phosphodiesterase
- (v) One of the following is prodrug of Enalaprilate
- (a) Lisinopril (b) Captopril
(c) Enalapril (d) Benazepril
- (vi) One of the following antiarrhythmic drug is also used as antiepileptic
- (a) Sotalol (b) Phenytoin
(c) Amiodranone (d) Iexiletine

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- (vii) One of the following have sulphonamide character
- (a) Sotalol (b) Quinidine sulphate
(c) Phenytoin (d) Lidocaine
- (viii) Which one of the following is anti-hyperlipidemic agent?
- (a) Menadione (b) Clofibrate
(c) Both (a) and (b) (d) None of above
- (ix) One of the following is used in congestive heart failure
- (a) Digoxin (b) Timolol
(c) Acetazolamide (d) Ethacrynic acid
- (x) Identify the drug which act as oral contraceptive
- (a) Mifepristone (b) Tolbutamide
(c) Repaglinide (d) Both (a) and (b)
- (xi) Metformin falls under the class of
- (a) Sulfonyl ureas (b) Meglitinides
(c) Biguanides (d) Glucosidase inhibitors
- (xii) One of the following drugs is Benzoic acid derivative
- (a) Norgestril (b) L-thyroxine
(c) Nateglinide (d) Cocaine
- (xiii) Verapamil is a
- (a) Diuretic (b) Calcium channel blocker
(c) Antimetabolite (d) None of the above
- (xiv) Mannitol is
- (a) Loop diuretic (b) Potassium sparing diuretic
(c) Osmotic diuretic (d) None of the above
- (xv) Which of the following is a prodrug?
- (a) Minoxidil (b) Losartan
(c) Sodium nitroprusside (d) Verapamil
- (xvi) Dibucaine is a _____ drug.
- (a) Antineoplastic (b) Anesthetic
(c) Anti-diabetic (d) Antithyroid
- (xvii) Bleomycin is
- (a) Antibiotic (b) Antineoplastic
(c) Both (a) and (b) (d) Antihypertensive

(xviii) Which of the following peptide is responsible for vasoconstriction and Na^+ retention?

- (a) Angiotensin I (b) Angiotensin II
(c) Angiotensin III (d) Renin

(xix) Which of the following drug is a peptide?

- (a) Digoxin (b) Digitoxin
(c) Nesiritide (d) Bosentan

(xx) Cardiac glycosides act by blocking

- (a) K^+ pump (b) Na^+ pump
(c) $\text{Na}^+ - \text{K}^+$ ATPase pump (d) None of the above

2. Answer any seven :

- (a) Write SAR of H₁ receptor antagonist. (5)
(b) Write a note on Calcium channel blockers. (5)
(c) Give the structure of (5)
(i) Diphenylpyraline hydrochloride
(ii) Buclizine hydrochloride
(iii) Chlorpheniramine Maleate
(iv) Loratadine
(v) Cetirizine
(d) Give the synthesis of Warfarin and Disopyramide phosphate. (5)
(e) What are anticoagulants? Classify them and write a short note on injectable anticoagulants. (5)
(f) Explain physiological mechanism of erectile dysfunction and drugs used to treat it. (5)
(g) Explain hyperthyroidism with symptoms, causes and their treatment. (5)
(h) Give the SAR of Local anesthetics. (5)
(i) Explain the synthesis of tolbutamide and Benzocaine. (5)

3. Answer any two :

- (a) What is angina pectoris? Classify anti-anginal agents. Explain structure, properties, mechanism of action and uses of Nitroglycerin and Dipyridamole. (10)
- (b) Classify oral-hypoglycemic agents with suitable examples and their structures. Enumerate chemistry and importance of insulin. (10)
- (c) What are anti-histamines? Classify them and explain the synthesis of Promethazine hydrochloride and Cimetidine. (10)
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