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2021

B.Pharm. 5th Semester (Regular) Examination

MEDICINAL CHEMISTRY - II (THEORY)

(New Regulation)

(w.e.f 2017-18)

Full Marks – 75

Time – Three hours

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

1. Multiple choice questions (MCQ) Answer all questions : (20 × 1 = 20)
- (i) Timolol contains which of following basic rings
- (a) 1,2,5-Thiadiazole and morpholine
(b) 1,2,4-Thiadiazole and morpholine
(c) 1,4-Thiazole and morpholine
(d) None of these
- (ii) The synthesis of histamine from histidine is catalyzed by
- (a) D-Histidine decarboxylase (b) R-Histamine
(c) L-Histidine decarboxylase (d) None of these
- (iii) Which of the following enantiomers of verapamil is more potent?
- (a) R-verapamil (b) S-verapamil
(c) Racemic (d) None of these
- (iv) The antihypertensive drug with a tetrazole nucleus is
- (a) Diazoxide (b) Taludipine
(c) Fosinopril (d) Valsartan
- (v) Which of the following is natural vasodialator?
- (a) Bradykinin (b) Adenosine
(c) Both (d) None

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- (vi) Which one of the following is a potassium sparing diuretic?
- (a) Acetazolamide (b) Furosemide
(c) Spironolactone (d) None of these
- (vii) Which of the following is used in digitalis induced arrhythmia?
- (a) Phenytoin (b) Propafenone
(c) Amiodarone (d) All
- (viii) In Thiazide diuretics electron withdrawing group must be at
- (a) 5th position (b) 6th position
(c) 7th position (d) 8th position
- (ix) Which one of the following is an anticoagulant drug
- (a) Timolol (b) Lisinopril
(c) Clofibrate (d) Warfarin
- (x) Which one of the following is a plant based antineoplastic agent
- (a) Mercaptopurine (b) Doxorubicin
(c) Etoposide (d) None of these
- (xi) Methotrexate acts as antineoplastic agent by
- (a) Inhibiting Dihydrofolate reductase
(b) Alkylating 7th nitrogen of guanine residue in DNA
(c) Both (a) and (b)
(d) None of these
- (xii) The starting material for the synthesis of mechlorethamine is
- (a) Malonic acid (b) p-Amino phenyl butyric acid
(c) Ethylene oxide (d) None of these
- (xiii) The IUPAC name for Diphenhydramine is
- (a) 2-Chloro-N, N-dimethylethanamine
(b) 2-(Benzhydryloxy)-N, N-dimethylethanamine
(c) Diethylamino ethyl chloride
(d) None of these

3. Short answers (Answer 7 out of 9): (7 × 5 = 35)
- (a) Define antihistaminic drugs. Discuss the SAR of H₁-receptor blockers. (1 + 4)
 - (b) What is carbonic anhydrase inhibitor? Discuss the synthesis of acetazolamide. (1 + 4)
 - (c) Define Diabetes mellitus. Write down the classification of oral hypoglycaemic agents with suitable examples. (1 + 4)
 - (d) Discuss the nomenclature of steroids.
 - (e) Define and classify antithyroid agents with examples. (1 + 4)
 - (f) Discuss the synthesis of Nitroglycerin and Isosorbide dinitrite. (2.5 + 2.5)
 - (g) Enumerate the coumarin derived anticoagulants and write the synthesis of one of them.
 - (h) Write down the significance of HDL, LDL in body. Write a short note on antihyperlipidemic agents. (2 + 3)
 - (i) Discuss briefly about the biological effects of glucocorticoids.
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