

**FACULTY OF PHARMACY**

**B. Pharmacy V Semester (PCI) (Main & Backlog) Examination, March 2024**

**Subject: Medicinal Chemistry-II**

**Time: 3 Hours**

**Max. Marks: 75**

**PART - A**

**Note: Answer all the questions.**

**(10 x 2 = 20 Marks)**

1. Give the structures of omeprazole and lansoprazole.
2. Write the mechanism of action of anticancer plant products.
3. Outline the synthesis of nitroglycerin.
4. Discuss the mechanism of action of ACE inhibitors.
5. Outline the synthesis of warfarin.
6. Discuss the mechanism of action of HMGCoA reductase inhibitors.
7. Write the structures of oestrone and diethylstilbestrol.
8. Give the mechanism of action of insulin.
9. Discuss the mechanism of action of glucosidase inhibitors with examples.
10. Write the structures of lidocaine and dibucaine.

**PART - B**

**Note: Answer any two questions.**

**(2 x 10 = 20 Marks)**

11. (a) Classify H<sub>1</sub>-antagonists with two structures from each class.  
(b) Classify antimetabolites? Explain the mechanism of action and synthesis of methotrexate.
12. (a) Explain the mechanism of action of anti-arrhythmic drugs with examples.  
(b) Outline the synthesis of chlorothiazide and furosemide.
13. (a) Classify oral hypoglycemic drugs with one structure from each class.  
(b) Discuss SAR of local anesthetics.

**PART - C**

**Note: Answer any seven questions.**

**(7 x 5 = 35 Marks)**

14. Discuss the mechanism of action of gastric proton pump inhibitors.
15. Write the mechanism of action of vasodilators and outline the synthesis of isosorbide dinitrite.
16. Classify anti-hypertensive agents with one structure from each class.
17. Give an account on anticoagulants. Give the synthesis of warfarin.
18. Write in detail about stereochemistry of steroids.
19. Write a note on thyroid and anti-thyroid drugs.
20. Discuss mechanism of action of sulfonylureas and thiazolidinediones with examples.
21. Classify local anesthetics with structures.
22. Outline the synthesis of tolbutamide and procaine.

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