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Total No. of Pages : 02

Total No. of Questions : 10

B.Pharmacy (Sem.-3)

**PHARMACEUTICAL CHEMISTRY-IV (ORGANIC CHEMISTRY)**

Subject Code : PHM-232

Paper ID : [D0155]

Time : 3 Hrs.

Max. Marks : 80

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of FIFTEEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains FOUR questions carrying TEN marks each and students have to attempt any THREE questions.

**SECTION-A****1. Answer briefly :**

- a. Name two methods for preparation of aryl halides.
- b. Differentiate between monosaccharides and disaccharides.
- c. Define and example of reducing sugar.
- d. Coumarins are derivative of.....Chemically they are.....
- e. Xanthine contains.....and.....nucleus.
- f. Give the name and structure of furan, and pyrrole ring containing compounds respectively.
- g. Define and give formula for saponification value.
- h. Write the name and structure of theophylline and theobromine.
- i. Define oil, Give their chemical structure.
- j. Give the name and structure of two phospholipids.
- k. Why pyridine is more basic than pyrrole?

- l. Pyrrole boiling point is higher than furan and thiophene, why?
- m. Give the full form of RNA and its bases.
- n. Justify unusual small dipole moment of aryl halides.
- o. Give the secondary structures for protein.

### SECTION-B

- 2. Write a short note on Coumarins.
- 3. What are primary requirements for Micheal addition reaction, explain with example.
- 4. How many isomeric structure of glucose are possible? Explain cyclic structure of glucose.
- 5. Differentiate between nucleotides and nucleosides.
- 6. Discuss Reduction and Hoffmann's degradation of pyridine.

### SECTION-C

- 7. How do fats differ from oils? Name various types of phospholids and indicate chemical structures of each.
- 8. Outline the two mechanism for aromatic nucleophilic substitution reactions of aryl halides.
- 9. Name the three different methods for oil or fat analysis. Discuss in detail their procedure, with their formula and significance of saponification value.
- 10. What are carbohydrates? Give their detailed classification along with suitable examples.