

Code No. 4213

## FACULTY

### B. Pharmacy 2/4 I – Semester (Suppl.) Examination, April 2017

#### Subject: Pharmaceutical Organic Chemistry – I

Time: 3 Hrs

Max. Marks: 70

**Note: Answer all questions. All questions carry equal marks.**

- |   |       |
|---|-------|
| 1 a) Discuss the effect of intramolecular and intermolecular forces.                        | 8     |
| b) Explain the following terms:   |       |
| i) Inductive effect   | 3     |
| ii) Resonance effect.   | 3     |
| <b>OR</b>   |       |
| c) What is isomerism? Write about structural isomerism.                                     | 6     |
| d) Add a note on activation energy.   | 4     |
| e) Define the terms with examples:  | 4     |
| i) Bond angle   |       |
| ii) Heterolysis.  |       |
| 2 a) Write the reaction and mechanism of anti-Markovnikov's addition.                       | 7     |
| b) Give the structural formulas of the following:   | 3     |
| i) 4-Ethyl-2,4-dimethylheptane  |       |
| ii) 1,2-Dibromo-2-methylpropane   |       |
| iii) 3-Ethyl-2-methylpentane.   |       |
| c) Write any two methods for synthesis of alkenes.  | 4     |
| <b>OR</b>   |       |
| d) Explain the stability of cycloalkanes by different theories.                             | 10    |
| e) Write any two chemical reactions of alkanes.   | 4     |
| 3 a) Give the structural formulas for the following:  | 4     |
| i) 2-Bromoethanol   |       |
| ii) Tert-butyl isobutyl ether   |       |
| iii) 2-Fluoro-3-pentanol  |       |
| iv) n-Butyl ethyl ether   |       |
| b) Write the mechanism of dehydration of alcohols.  | 6     |
| c) Add a note on Walden inversion.  | 4     |
| <b>OR</b>   |       |
| d) Give the reasons for the following statements:   | 2     |
| i) Alcohols have higher boiling points than alkanes   |       |
| ii) Lower alcohols are soluble in water   |       |
| e) How will you distinguish between primary, secondary and tertiary alcohols with examples? | 7     |
| f) Discuss the mechanism for $S_N1$ reactions.  | 5     |
| 4 a) Give the mechanisms for the following:   | 3x2=6 |
| i) Aldol condensation   |       |
| ii) Haloform reaction   |       |
| iii) Wittig reaction  |       |

Code No. 4213

..2..

b) Write any four methods for preparation of carbonyl compounds.

**OR**

c) Write the general methods of preparation of carboxylic acids.

d) Discuss reactivity and applications of acetoacetic ester.

7

7

5 a) How will you separate a mixture of amines with different methods.

6

b) Write about the reactions of amines.

8

**OR**

c) Give the synthetic applications of aryl diazonium salt.

4

d) Write the nomenclature and acidity of nitro alkanes.

5

e) Give a note on diazotization and Sandmeyer reaction.

5

\*\*\*\*

www.FirstRanker.com