Reg No:.....
Name :.....

K25FY2415 B

Second Semester FYUGP Chemistry Examination
APRIL 2025 (2024 Admission onwards)
KU2DSCCHE114 (FOUNDATIONS IN PHYSICAL AND ORGANIC CHEMISTRY)
(DATE OF EXAM: 30-4-2025)

Time : 90 min | Maximum Marks : 50

Part A (Answer any 6 questions. Each carries 2 marks)

1. Define the terms system and surroundings .Give one example for a system. 2
2. What is an acid according to the Arrhenius concept? Give any two examples. 2
3. Define pH. Calculate the pH of 0.01M HNO_3. 2
4. Write a homologous series of alkyl chlorides . 2
5. What is homolysis? Give an example 2
6. What is heterolysis?Give an example. 2
7. What is asymmetric and dissymmetric molecule? 2
8. What is iodometry? Give an example 2

Part B (Answer any 4 questions. Each carries 6 marks)

9. State the first law of thermodynamics and what are its limitations. 6
10. Write a short note on hydrolysis of salts. 6
11. Write the structural formula and IUPAC names of the following i)Neopentane ii) ethyl methyl ketone iii) isopropyl alcohol iv) ethyl acetate 6
12. Distinguish between carbanions and carbocations. 6
13. Draw and explain the structures of optical isomers of tartaric acid 6
14. Explain the principle of cerimetry. 6

Part C (Answer any 1 question(s). Each carries 14 marks)

15. Explain the different types of solvent extraction techniques based on the method of operation 14
16. (a) Describe the different types of structural isomerism with an example each. 7
    (b) What is resolution? Explain various methods for resolution of racemic mixture? 7