Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_

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**End Semester Examination – Nov/Dec – 2018**

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| **Code :** | **14CH3007** | **Duration :** | **3hrs** |
| **Sub. Name :** | **SUPRAMOLECULAR CHEMISTRY** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Illustrate the “Lock and Key Principle” indicating its drawbacks. | CO1 | 16 |
| b. | Relate Co-operativity with Complementarity. | CO1 | 4 |
| (OR) | | | | |
| 2. | a. | Analyze the Induced fit model with examples. | CO1 | 16 |
| b. | Explain Pre organization in Supramolecular Chemistry? | CO1 | 4 |
|  |  |  |  |  |
| 3. | a. | With a neat sketch, describe the High dilution synthesis of a macrocycle with an example? | CO2 | 16 |
| b. | Identify the following four structures.  http://upload.wikimedia.org/wikipedia/commons/thumb/9/9f/Various_crown_ethers_%28molecular_diagrams%29.png/700px-Various_crown_ethers_%28molecular_diagrams%29.png | CO2 | 4 |
| (OR) | | | | |
| 4. | a. | Discuss the preparation, host-guest properties and applications of Crown ethers? | CO1 | 16 |
| b. | Distinguish Lariat ethers from others? | CO1 | 4 |
|  |  |  |  |  |
| 5. | a. | Categorize the different types of template synthesis of rotaxanes? | CO2 | 16 |
| b. | Summarize the different types of Supramolecular interactions? | CO2 | 4 |
| (OR) | | | | |
| 6. | a. | Discuss Racks, Ladders and Grids with pictorial representations. | CO3 | 16 |
| b. | Elaborate the applications of Helicates? | CO3 | 4 |
|  |  |  |  |  |
| 7. | a. | Describe the structures and guest properties of Clathrate Hydrates? | CO3 | 16 |
| b. | Discriminate UreaClathrates from ThioureaClathrates? | CO3 | 4 |
| (OR) | | | | |
| 8. | a. | Explain the structure, composition and catalysis property of Zeolites? | CO3 | 16 |
| b. | Write short notes on Trimesic acid clathrates? | CO3 | 4 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. | a. | Prepare a brief report on Coordination polymers. | CO2 | 16 |
| b. | Identify the important applications of Metal Organic Frame works? | CO2 | 4 |