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



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – Nov/Dec – 2016**

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **15CH3009** | **Duration :** | **3hrs** |
| **Sub. Name :** | **Synthetic Methodology and Natural Products** | **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. | Discuss the NBS with reactions | CO01 | **4** |
| b. | Write the Stille reaction with the catalytic cycle mechanism. | CO01 | **8** |
| c. | What do you mean by DDQ and explain how it is useful for aromatization? | CO01 | **8** |
| **(OR)** | | | | |
| 2. | a. | Discuss the Ullmann Coupling reactions with mechanism | CO01 | **8** |
| b. | What do you mean by reductive elimination and oxidative addition | CO01 | **4** |
| c. | Write the reaction mechanism of Suzuki reaction with catalytic cycle. | CO01 | **8** |
| 3. | a. | How will you prepare amino acids using multicomponent reaction? Write the mechanism. | CO01 | **6** |
|  | b. | Predict the starting materials of the following products of multicomponent reaction   1. b) c) d) | CO01 | **8** |
|  | c. | Write the Passineri reaction with plausible mechanism | CO01 | **6** |
| **(OR)** | | | | |
| 4. | a. | Write the methodology to identify the active compounds from natural products | CO01 | **6** |
|  | b. | Predict the starting materials of the following products derived from MCRs.   1. b) c) d) | CO01 | **8** |
|  | c. | What are the salient features of MCRs and explain with design strategies. | CO01 | **6** |
| 5. | a. | Name the following compounds   1. ii. iii. iv. | CO01 | **4** |
|  | b. | Describe the general stratergies of heterocyclic synthesis | CO01 | **6** |
|  | c. | Write the structure, preparation, properties and reactions of imidazole? | CO01 | **10** |
| **(OR)** | | | | |
| 6. | a. | Name the following compounds  i. ii. iii. iv. | CO01 | **4** |
|  | b. | Write the structure, preparation, properties and reactions of pyrazine? | CO01 | **10** |
|  | c. | Write the Ugi Reaction with plausible mechanism | CO01 | **6** |
| 7. | a. | Describe the methods of structure elucidation of steroids? | CO01 | **8** |
|  | b. | Write the various general chemical properties of Terpinods | CO01 | **6** |
|  | c. | Discuss the advanced techinques used to confirm the given compound structure  Image result | CO01 | **6** |
| **(OR)** | | | | |
| 8. | a. | Discribe the structure elucidation methods of alkaloids | CO01 | **8** |
|  | b. | Discuss any three reactions of diazines. | CO01 | **6** |
|  | c. | Image resultHow will you confirm the structure of quinine using advanced methodology | CO01 | **6** |
|  | | **Compulsory:** |  |  |
| 9. | a. | What do you mean by Ruff Degradation? Write the reaction. | CO01 | **3** |
|  | b. | Draw the structure of cyclic hexapeptide using any 6 aminoacids with their names. | CO01 | **6** |
|  | c. | Draw the structure of A, T, G, C and wirte the compositions of nucleic acids. | CO01 | **8** |
|  | d. | Discuss the Kiliani Fisher Synthesis. | CO01 | **3** |

ALL THE BEST