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

**End Semester Examination – Nov / Dec – 2019**

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| **Code :** | **18CH3001** | **Duration :** | **3hrs** |
| **Sub. Name :** | **RESEARCH METHODOLOGY AND IPR** | **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. | Write short notes on Scifinder as a source of chemical literature. | CO2 | 6 |
| b. | Abbreviate DOI and write its uses. | CO3 | 6 |
| c. | How the imfact factor of a journal is calculated? Give examples. | CO4 | 8 |
| **(OR)** | | | | |
| 2. | a. | Describe about the *h*-index and how it is calculated? | CO3 | 6 |
|  |  |  |  |
| b. | Discuss about the substructure search and its uses. | CO4 | 6 |
| c. | Narrate the protocols in the identification of research problems. | CO6 | 8 |
|  |  |  |  |  |
| 3. | a. | How will you identify the chemical suppliers and discuss with the procedure. | CO3 | 6 |
|  | b. | How may structure tools are used to draw the following structures:       1. (ii)     (iii) | CO4 | 6 |
|  | c. | Discuss the salient features of chemistry softwares and explain with any two examples. | CO4 | 8 |
| **(OR)** | | | | |
| 4. | a. | Mention the procedure to search your desire compounds in the literature. | CO4 | 6 |
| b. | How may structure tools are used to draw the following structures:         1. (ii) (iii) | CO4 | 6 |
| c. | Narrate the standard format of manuscript for publications in chemistry. | CO5 | 8 |
|  |  |  |  |  |
| 5. | a. | Describe about the soxhlet apparatus with a neat diagram. | CO3 | 8 |
| b. | How will you handle hygroscopic solids? | CO3 | 6 |
| c. | Narrate the procedure for the handling of reactions under anhydrous condition. | CO3 | 6 |
| **(OR)** | | | | |
| 6. | a. | Explain the various procedures to monitor chemical reactions. | CO4 | 8 |
| b. | Give an account of Karl Fisher Titration with equations. | CO4 | 6 |
| c. | Describe about the Parr Apparatus with a neat diagram. | CO4 | 6 |
|  |  |  |  |  |
| 7. | a. | Discuss the various advantages of effective literature studies. | CO4 | 6 |
| b. | Discribe the miscontacts in Research. | CO4 | 6 |
| c. | Give an outline of the format of a research proposal. | CO4 | 8 |
| **(OR)** | | | | |
| 8. | a. | Discuss the various components in a technicalreport. | CO4 | 8 |
| b. | Mention the difference betweenthedissertation and thesis. | CO4 | 6 |
| c. | Write short notes on Research Ethics. | CO4 | 6 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Give an account of Patent filing procedure. | CO5 | 6 |
| b. | Discuss licensing and technology of transfer with examples. | CO5 | 6 |
| c. | What do you mean by WO patents? Discuss the procedures for granting the patents. | CO5 | 8 |