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

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

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| **Code :** | **17CH2002** | **Duration :** | **3hrs** |
| **Sub. Name :** | **ORGANIC REACTION INTERMEDIATES AND STEREOCHEMISTRY** | **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. | Classify the organic compounds with suitable examples? | CO1 | 12 |
| b. | Explain the Major reaction of carbocation? | CO2 | 8 |
| (OR) | | | | |
| 2. | a. | What are the rules to be followed to name hydrocarbons as per IUPAC? Give your answer with suitable example? | CO1 | 10 |
| b. | Give the structure of following compounds  i) 1,4 – hexadione ii) 1,4 – hexadiene iii) 3- methyl-3-butenal | CO1 | 6 |
| c. | Briefly discuss the formation of arynes? | CO2 | 4 |
|  |  |  |  |  |
| 3. | a. | Discuss the mesomeric or resonance effect and the hyperconjucation effect? | CO2 | 12 |
|  | b. | Give any four differentiate between inductive and resonance effect? | CO2 | 8 |
| (OR) | | | | |
| 4. | a. | Highlight the salient feature of Inductive effect with suitable example? | CO2 | 10 |
|  | b. | Elaborate the types of streoisomerism? | CO4 | 10 |
|  |  |  |  |  |
| 5. | a. | Explain the preparation of aldehyde with any four methods? | CO3 | 10 |
|  | b. | Write short notes on formation of Arenediazonium salts? | CO3 | 10 |
| (OR) | | | | |
| 6. | a. | Outline the major chemical properties of nitrogen containing organic compounds? | CO3 | 10 |
|  | b. | Discuss any three major chemical reaction for ketones? | CO3 | 10 |
|  |  |  |  |  |
| 7. | a. | Explain the Cahn Ingold Prelog rules with suitable example? | CO5 | 12 |
|  | b. | Write the configuration E or Z of the following organic compounds? | CO5 | 8 |
| (OR) | | | | |
| 8. | a. | Define cis and trans isomerism? Explain the cis and trans isomerism with suitable example? | CO5 | 10 |
|  | b. | Taking suitable examples explain the E, Z system for designating geometrical isomers? | CO5 | 10 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Draw the Newmann projection for different conformations of butane? | CO6 | 10 |
|  | b. | In mono substituted cyclohexanes, why the substituent prefer to occupy the equatorial position? | CO6 | 10 |