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



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

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| **Code :** | **16CH1002** | **Duration :** | **3hrs** |
| **Sub. Name :** | **APPLIED CHEMISTRY FOR ENGINEERS** | **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 Ion exchange process with a neat diagram. Give its merits and demerits. | CO1 | 10 |
| b. | What do you understand from reverse Osmosis? Explain it. | CO1 | 10 |
| **(OR)** | | | | |
| 2. | a. | Describe the zeolite process for softening of water with a neat diagram. | CO1 | 10 |
| b. | How the municipal water can be purified by adding chlorinated compounds? | CO1 | 10 |
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| 3. | a. | Elucidate various moulding constituents of plastics with examples. | CO2 | 10 |
| b. | Describe the preparation, properties and applications of polyvinyl chloride. | CO2 | 10 |
| **(OR)** | | | | |
| 4. | a. | Write a note on biodegradable polymers. | CO2 | 10 |
| b. | Differentiate between thermosetting polymers and thermoplastics. | CO2 | 10 |
|  |  |  |  |  |
| 5. | a. | Give your comments on food adulteration and identification methods. | CO1 | 10 |
| b. | Illustrate the chemistry of hair and the working of hair color. | CO1 | 10 |
| **(OR)** | | | | |
| 6. | a. | How fastfood affects our body? Discuss advantages and disadvantages of aginomotto. | CO1 | 10 |
| b. | Organic food is essential in our daily life. Justify it. | CO1 | 10 |
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| 7. | a. | Derive Nernst Equation. | CO2 | 10 |
| b. | Enumerate the Hydrogen – Oxygen Fuel cell construction with a neat cell diagram. | CO2 | 10 |
| **(OR)** | | | | |
| 8. | a. | What are secondary batteries? Discuss the cell setup of Lead Acid Battery. | CO2 | 10 |
| b. | Comment on Sacrificial Anodic method. How it would protect the underground pipelines? | CO2 | 10 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Write a note on applications of Nanotechnology in different fields. | CO3 | 10 |
| b. | How the nanomaterials can be prepared? Discuss any one of the methods in detail. | CO3 | 10 |