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**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

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

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

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

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **APPLIED CHEMISTRY** | **Duration :** | **3 hrs** |
| **Sub. Name :** | **CH106** | **Max. marks :** | **100** |

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| **Q. No.** | **Questions** | | **Marks** |
| **PART-A(10X1=10 MARKS)** | | | |
| 1. | Name the monomers used in the preparation of epoxy resin. | | (1) |
| 2. | An example for thermosetting plastic is\_\_\_\_\_\_\_\_\_\_\_\_. | | (1) |
| 3. | Draw the structure of disodium salt of EDTA. | | (1) |
| 4. | Name the substance used in the regeneration of cation exchange membrane. | | (1) |
| 5. | Write the Dulong’s formula. | | (1) |
| 6. | Define Octane number. | | (1) |
| 7. | What is the main difference between primary and secondary cell? | | (1) |
| 8. | The cathode used in dry cell is\_\_\_\_\_\_\_\_\_\_\_\_ | | (1) |
| 9. | What is nanomaterial? | | (1) |
| 10. | The favourable temperature for fermentation process is \_\_\_\_\_\_\_\_\_\_\_\_. | | (1) |
| **PART B(5 X 3= 15 MARKS)** | | | |
| 11. | Define Functionality. Give two examples | | (3) |
| 12. | Explain the types of hardness of water. | | (3) |
| 13. | What you meant by Knocking? Give one example for anti-knocking material. | | (3) |
| 14. | Write a note on Electro chemical series. | | (3) |
| 15. | What are semiconductor materials? | | (3) |
| **PART C(5 X 15= 75 MARKS)** | | | |
| 16. | a. | Discuss the classification and various types of polymers. | (8) |
| b. | Write the preparation, properties and uses of Polyethylene (PE) and PVC. | (7) |
| (OR) | | | |
| 17. | a. | Write a note on the components of plastics in moulding process. | (8) |
| b. | Discuss the preparation, properties and uses of Bakelite. | (7) |
| 18. | a. | Describe ion-exchange method for purification of water. | (10) |
| b. | Mention the various internal conditioning methods of water. | (5) |
| (OR) | | | |
| 19. | a. | Describe the steps involved in the purification of water for drinking purpose. |  |
| 20. | a. | Discuss the characteristics of good fuel. | (7) |
| b. | Explain the manufacture of Coke by Otto-Hoffman method with a diagram. | (8) |
| (OR) | | | |
| 21. | a. | Discuss the Flue gas analysis by Orsat apparatus with diagram. |  |
| 22. | a. | Derive the Nernst equation for electrode potential. | (8) |
| b. | What are the factors influencing corrosion? | (7) |
| (OR) | | | |
| 23. | a. | Write notes on Fuel cell with diagram. | (5) |
| b. | Describe the construction and working of Lead-acid battery. | (10) |
| 24. | a. | What are enzymes? Mention their general characteristics. | (5) |
| b. | Discuss the manufacture of Ethyl alcohol from starch. | (10) |
| (OR) | | | |
| 25. | a. | Write notes on nanowires and nanotubes. | (8) |
| b. | Discuss the applications of nanomaterials. | (7) |

ALL THE BEST