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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 :** | **12CE101** | **Duration :** | **3 hrs** |
| **Sub. Name :** | **Basic Civil Engineering** | **Max. marks :** | **100** |

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| **Q. No.** | **Questions** | | **Marks** |
| **PART-A(10X1=10 MARKS)** | | | |
| 1. | Mention the disciplines in Civil Engineering related to water resources. | | (1) |
| 2. | Mention the role of Civil Engineers in Environmental Impact Assessment. | | (1) |
| 3. | Define reduced level. | | (1) |
| 4. | Write parallel axis theorem. | | (1) |
| 5. | What is meant by M20 concrete? | | (1) |
| 6. | Sketch the dimensions of a standard brick. | | (1) |
| 7. | List the purpose of a harbor. | | (1) |
| 8. | Enumeratethe classification of roads based on the materials used for construction. | | (1) |
| 9. | Write the maximum acceptable limit of copper in drinking water. | | (1) |
| 10. | Define the term “Sewer”. | | (1) |
| **PART B(5 X 3= 15 MARKS)** | | | |
| 11. | Give the typical responsibilities of civil engineers. | | (3) |
| 12. | Define surveying and explain the classification of Surveying. | | (3) |
| 13. | What are the requirements of a good brick? | | (3) |
| 14. | Differentiate between rigid pavements and flexible pavements. | | (3) |
| 15. | Writethe steps involved in water supply scheme. | | (3) |
| **PART C(5 X 15= 75 MARKS)** | | | |
| 16. |  | Explain the dependence of other sectors on civil engineering. | 15 |
| (OR) | | | |
| 17. |  | Write short notes on the scope and Functions of civil engineering. | 15 |
| 18. |  | The following perpendicular offsets were taken out at 10 m intervals from a survey line to an irregular boundary line of 3.80 m, 4.90 m, 7.20 m, 5.6 m, 6.35 m, 7.40 m, 4.80 m, 5.30 m, 8.20 m. Calculate the area enclosed between the Survey line and the irregular boundary line by using 1. Trapezoidal Rule and  2. Simpson’s Rule | 15 |
| (OR) | | | |
| 19. |  | A steel rod of 20mm diameter and 1m length is subjected to an axial pull of 50kN.Determine the stress, strain and elongation of the rod taking young’s modulus ,E=2x105N/mm2 | 15 |
| 20. | a. | Write the qualities of good building stone. | 8 |
| b. | Write the advantages of concrete. | 7 |
| (OR) | | | |
| 21. |  | List out the characteristics of the following building materials a)Steel b) Timber | 15 |
| 22. |  | Formulate the general layout of an Harbor and explain its components. | 15 |
| (OR) | | | |
| 23. |  | Draw the typical cross section of a permanent way and explain its components in detail. | 15 |
| 24. |  | With a neat sketch explain the working principle of septic tank and its advantages. | 15 |
| (OR) | | | |
| 25. |  | Briefly describe the points to be considered in the selection of a site for a dam and its classification. | 15 |