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



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

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

**End Semester Examination – April / May – 2017**

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| **Code :** | **13CE101** | **Duration :** | **3hrs** |
| **Sub. Name :** | **BASIC CIVIL ENGINEERING** | **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. | 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 i)Trapezoidal Rule and ii). Simpson’s Rule. | CO1 | 10 |
| b. | List out the Characteristics of Stones and Concrete. | CO1 | 10 |
| (OR) | | | | |
| 2. | a. | Explain the classification of surveying   * + 1. Based upon the instruments employed.   ii) Based upon the nature of the field survey. | CO1 | 10 |
| b. | List out the characteristics of the following building materials  a) Bricks b) Timber. | CO1 | 10 |
| 3. | a. | Summarize the different types of foundations with neat sketch. | CO1 | 10 |
|  | b. | Explain different of Flooring with neat diagram. | CO1 | 10 |
| (OR) | | | | |
| 4. | a. | Discuss the selection of site and the major components of building. | CO1 | 10 |
|  | b. | A house property has the following specification and data.  Size of the plot : 20 x 10 m  Market rate of land : Rs. 3000 per m2  Age of the building : 20 years  Plinth area Ground Floor : 180 m2  First Floor : 120 m2  Wall Area : 10 % of total plinth  Area  Plinth Area rate is : Rs.12500 per m2  The life of the building : 100 years  Determine the plinth area of the building, carpet area of ground floor and first floor of the building, floor area ratio of the building and value of the building. | CO1 | 10 |
| 5. | a. | Illustrate Septic Tank and write a neat diagram. | CO1 | 10 |
|  | b. | Briefly the concepts involved in “the rain water harvesting”. | CO1 | 10 |
| (OR) | | | | |
| 6. | a. | Distinguish between slow sand and rapid sand filters. | CO1 | 10 |
|  | b. | Explain the process involved in collection and disposal of solid wastes. | CO1 | 10 |
| 7. | a. | Formulate the general layout of Airport with a neat diagram. | CO1 | 10 |
|  | b. | Summarize the importance of transportation Engineering. | CO1 | 10 |
| (OR) | | | | |
| 8. | a. | Discuss on Railways with its components. | CO1 | 10 |
|  | b. | Briefly explain about bitumen and water bound macadam roads. | CO1 | 10 |
|  | | **Compulsory**: |  |  |
| 9. | a. | What are the importance of dams?Explain Earth dam with neat sketch. | CO1 | 10 |
|  | b. | Explain the importance of Irrigation Engineering. | CO1 | 10 |