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 – Nov/Dec – 2016**

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|  |  | **Semester :** | **2016-17 ODD** |
| **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. | | A series of offsets were taken from a chain line to a curved boundary line at a regular interval of 10 metres. The length of the offsets are 2.6 , 3.7 m, 4.8 m, 3.1 m, 1.6 m, 7.85 m,3.9 m, 4.5 m, and 5.8 m. Find the area of strip between chain line and boundary line by Trapezoidal Rule and Simpson’s Rule. | CO1 | 10 |
| b. | | Explain the scope & Function of Civil engineers in detail. | CO1 | 10 |
| (OR) | | | | | |
| 2. | a. | | A series of offsets were taken from a chain line to a curved boundary line at regular interval of 10m.The length of the offsets are 2.2m, 1.4m, 2.8m, 2.2m, 2.6m, 4m, 3.2m, 3.4m and 3.8m.Find the area of the strip between chain line and boundary line by all the available methods. | CO1 | 10 |
| b. | | List out the characteristics of the following building materials a) Bricks b) Timber. | CO1 | 10 |
| 3. | a. | | Explain with neat diagram about Mat foundation , Pile foundation and spread footing. | CO1 | 10 |
|  | b. | | Explain different bonds in brick masonry with sketch. | CO1 | 10 |
| (OR) | | | | | |
| 4. | | a. | Explain the classification of beams and columns with neat sketch | CO1 | 10 |
|  | | b. | A building with plinth area of 100 m2 was constructed over a plot area of 200 m2, about 10 years ago. Plinth area rate at the time of construction was Rs 900 per m2. Find the value of the building taking the life of the building as 50 years. Cost of the land is Rs 300 per m2. Also find the value of the total property if the cost of the land is Rs 300 per m2. | CO1 | 10 |
| 5. | | a. | Illustratethe oxidation pond and write a neat diagram | CO1 | 10 |
|  | | b. | Briefly explain with sketch about “the rain water harvesting” ? | CO1 | 10 |
| (OR) | | | | | |
| 6. | a. | | Summarize the process involved in purification of water | CO1 | 10 |
|  | b. | | Explain the process involved in collection and disposal of solid wastes | CO1 | 10 |
| 7. | a. | | Formulate the general layout of harbour and its classification. | CO1 | 10 |
|  | b. | | Draw the cross section of WBM roads and explain its components. | CO1 | 10 |
| (OR) | | | | | |
| 8. | a. | | Sketch the various components of permanent way and explain it. | CO1 | 10 |
|  | b. | | Enumerate the classification of Highway. | CO1 | 10 |
|  | | | **Compulsory:** |  |  |
| 9. | a. | | Briefly describe the points to be considered in the selection of a site for a dam and  Write notes on Arch dam. | CO1 | 10 |
|  | b. | | Define irrigation and its benefits. | CO1 | 10 |