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 :** | **14CE2033** | **Duration :** | **3hrs** |
| **Sub. Name :** | **BUILDING SERVICES** | **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. | Explain the different types of patterns of collecting system with the help of neat sketches. | CO3 | 10 |
| b. | Differentiate between Sewage and sullage. | CO1 | 5 |
| c. | Write the requirements of building drainage. | CO1 | 5 |
| (OR) | | | | |
| 2. | a. | Give an account of different types of sanitary fittings with diagram. | CO3 | 10 |
| b. | Explain the preliminary and secondary treatment of sewage. | CO3 | 10 |
| 3. | a. | Sketch and describe intercepting trap. | CO3 | 5 |
|  | b. | How does single stack plumbing system vary from two stack plumbing systems? | CO3 | 8 |
|  | c. | Explain the construction of intermittent sand filters. | CO3 | 7 |
| (OR) | | | | |
| 4. | a. | State the guidelines given by NBC for location and layout of substations. | CO1 | 5 |
|  | b. | What are the different types of wires? | CO1 | 5 |
|  | c. | With the help of neat sketch explain the construction of septic tank. | CO3 | 10 |
| 5. | a. | Give the recommendations to improve the illumination for old age people. | CO1 | 7 |
|  | b. | Sketch and explain an incandescent lamp. | CO3 | 8 |
|  | c. | List the drawbacks of Wave theory of light. | CO1 | 5 |
| (OR) | | | | |
| 6. | a. | Explain the natural and mechanical ventilation in detail. | CO2 | 10 |
|  | b. | Explain the components of packaged air conditioners. | CO2 | 5 |
|  | c. | Sketch the direct return plan of water piping. | CO2 | 5 |
| 7. | a. | List the main sources for occurrence of fire. | CO3 | 5 |
|  | b. | What are the precautions to be taken in the arrangement of automatic sprinkler system? | CO1 | 5 |
|  | c. | Explain the various types of sprinkler head that are commonly used. | CO3 | 10 |
| (OR) | | | | |
| 8. | a. | Give an account of different stages of fire. | CO1 | 5 |
|  | b. | State the different green features adopted in green buildings. | CO3 | 7 |
|  | c. | Explain about the microprocessor based alarm systems. | CO3 | 8 |
|  | | **Compulsory:** |  |  |
| 9. | a. | Give an account on the smart home. | CO3 | 10 |
|  | b. | Comment on “ Intelligent building – building of 21st century”. | CO3 | 10 |

ALL THE BEST