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 :** | **16CS1001** | **Duration :** | **3hrs** |
| **Sub. Name :** | **COMPUTATIONAL THINKING AND PROGRAMMING** | **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. | Convert (576)8 toHexadecimal. | CO1 | 4 |
| b. | Convert (1010)2 to Decimal. | CO1 | 3 |
| c. | Convert (268)10 to Octal. | CO1 | 3 |
| d. | Explain the different techniques involved in data collection. | CO1 | 10 |
| (OR) | | | | |
| 2. | a. | Summarize the different types of data compression techniques. | CO2 | 12 |
| b. | Differentiate qualitative and quantitative data with an example. | CO2 | 8 |
|  |  |  |  |  |
| 3. | a. | Explain the elements of computational thinking. | CO1 | 14 |
|  | b. | List and explain any three functional and non functional requirement of a media player. | CO2 | 6 |
| (OR) | | | | |
| 4. | a. | Write the algorithm and draw the flowchart to find the greatest among three numbers. Write the corresponding Python program. | CO2 | 14 |
|  | b. | Draw the truth table for the following:   1. AND ii. NOR iii. XOR | CO2 | 6 |
|  |  |  |  |  |
| 5. |  | Illustrate types of operators in python with suitable examples. | CO3 | 20 |
| (OR) | | | | |
| 6. |  | Describe the different forms of selection statement with suitable examples. | CO3 | 20 |
|  |  |  |  |  |
| 7. | a. | Define a Python function that accepts a number as input and returns the factorial of the number. | CO3 | 10 |
|  | b. | Compare break, continue and pass with suitable examples. | C03 | 10 |
| (OR) | | | | |
| 8. | a. | Define a list. Write the list operations in python with suitable example. | CO3 | 14 |
|  | b. | Write a python program to sort a set of numbers. | CO3 | 6 |
|  | |  |  |  |
|  | | **Compulsory:** |  |  |
| 9. |  | Outline the security and privacy features used in Internet. | CO4 | 20 |

ALL THE BEST