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| **ENGINEERING COLLEGE -LOGOMANGAYARKARASI COLLEGE OF ENGINEERING**  **(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)**  **MANGAYARKARASI NAGAR, PARAVAI, MADURAI – 625 402**  **Website: http://mce-madurai.ac.in E-Mail: : mangai.enggcoll@gmail.com** |

**Academic Year 2021-2022 (ODD) Semester**

**B.E- (All Branches)**

**Internal Exam-I Question**

**Year/Branch/Semester : I/ B.E (All Branch) / I**

**Subject Code & Name : GE3151 & PROBLEM SOLVING AND PYTHON PROGRAMMING**

**Date of the Exam & Session : 05.01.2022 & FN Marks: 50 Time: 1.30 Hours**

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| **PART-A (9X2=18)** | | | | |
| **S.No** | **Question** | **Level** | **CO** | **Marks** |
| **1.** | **What are keywords? Give example.** | **Remember** | **CO1** | **2** |
| **2.** | **Write an algorithm to calculate factorial number.** | **Apply** | **CO1** | **2** |
| **3.** | **Draw a flowchart to swap the values of two variables without using third variable.** | **Apply** | **CO2** | **2** |
| **4.** | **List out the notations of an algorithm.** | **Understand** | **CO1** | **2** |
| **5.** | **How python works in interactive mode and script mode with example.** | **Analyze** | **CO2** | **2** |
| **6.** | **What are the characteristics of algorithm?** | **Remember** | **CO1** | **2** |
| **7.** | **Write an algorithm to find the minimum amount the list of 10 numbers.** | **Apply** | **CO1** | **2** |
| **8.** | **List the symbols used in drawing the flowchart.** | **Understand** | **CO1** | **2** |
| **9.** | **What is a sequence? List out the types of sequence.** | **Understand** | **CO2** | **2** |
| **PART-B (2X16=32)** | | | | |
| **10. a.i.** | **Write a recursive algorithm to solve towers of Hanoi problem** | **Understand** | **CO1** | **16** |
| **OR** | | | | |
| **b.i** | **Discuss about the building blocks of algorithms.** | **Understand** | **CO1** | **8** |
| **b.ii.** | **Draw a flowchart to accept three distinct numbers, find the greatest and print the result.** | **Apply** | **CO1** | **8** |
|  |  |  |  |  |
| **11.a.i** | **Identify the simple strategies for developing algorithm.** | **Understand** | **CO1** | **8** |
| **a.ii.** | **Write an algorithm to reverse an integer digit.** | **Apply** | **CO1** | **8** |
| **OR** | | | | |
| **b.i.** | **Sketch the structures of interpreter and compiler. Detail the differences between them.** | **Understand** | **CO2** | **6** |
| **b.ii.** | **What is a data type? List out the different types of data types are available in Python.** | **Understand** | **CO2** | **10** |

**Questions-CO Mapping Summary**

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| --- | --- | --- | --- |
| **Question Number** | **CO Statement** | **Marks** | **Percentage** |
| **1,2,4,6,7,8,10** | **CO1:** Develop algorithmic solutions to simple computational problems (Apply) | **28** | **56** |
| **3,5,9, 11** | **CO2:** Develop and execute simple Python programs. (Apply) | **22** | **44** |

**Prepared By: Mr.B. Senthil Rajamanokar, AP/CSE Verified By: HoD-CSE**

**Approved By:Academic Dean**