# SILVER OAK COLLEGE OF ENGINEERING AND TECHNOLOGY
## BE - SEMESTER–II • MID SEMESTER-II EXAMINATION – SUMMER 2019
## SUBJECT: PROGRAMMING FOR PROBLEM SOLVING (3110003)

DATE: 27-04-2019        TIME: 10:30 am to 12:00 pm        TOTAL MARKS: 40

**Instructions:**    1. Question 1 is compulsory.
               2. Figures to the right indicate full marks.
               3. Assume suitable data if required.

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| Q.1 | (a) | What is user-defined function? Explain actual argument and formal arguments. | [03] |
| | (b) | What is recursion? Explain it with example. | [03] |
| | (c) | Define Structure. How does a structure differ from an array? | [04] |
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| Q.2 | (a) | What is function? List various categories of functions. Write a program using function to find maximum if two numbers | [06] |
| | (b) | What is function? Explain the function definition, function prototype and function call with example. | [05] |
| | (c) | Explain global variable and static variable with example. | [04] |

**OR**

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| Q.2 | (a) | Write a Program and explain the "call by value" and "call by reference" concept in C. | [06] |
| | (b) | Write a program to print Fibonacci series using recursion. | [05] |
| | (c) | Write a function in the program to return 1 if number is prime otherwise return 0. | [04] |
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| Q.3 | (a) | What is a pointer? How and when pointer is used? How it is initialized? What are the benefits of the Pointer? | [06] |
| | (b) | Write a program to change the value of variable using pointer. | [05] |
| | (c) | Distinguish between Structure and Union. | [04] |

**OR**

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|---|---|---|---|
| Q.3 | (a) | Write a program to perform matrix multiplication. | [06] |
| | (b) | Explain nested structure with example. | [05] |
| | (c) | Write a program for sorting using pointer. | [04] |