



GOVERNMENT COLLEGE OF ENGINEERING, JALGAON

(An Autonomous Institute of Government of Maharashtra)

National Highway No.6, JALGAON – 425 002

Phone No.: 0257-2281522

Website : www.gcoe.ac.in

Fax No.: 0257-2281319

E-mail : princoe@rediffmail.com



Name of Examination : **Summer 2021** - (Preview)

Course Code & Course Name : **CO101U - Programming for Problem Solving**

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Maximum Marks : **60**

Duration : **3 Hrs**

[Edit](#) [Print](#) [View Answer Key](#) [Close](#) **Answer Key Submission Type:** Marking scheme with model answers and solutions of numerical

Instructions:

1. All questions are compulsory.
2. Illustrate your answer with suitable figures/sketches wherever necessary.
3. Assume suitable additional data; if required.
4. Use of logarithmic table, drawing instruments and non programmable calculators is allowed.
5. Figures to the right indicate full marks.

- | | | |
|----|---|-----|
| 1) | What is importance of Operating System and compilers in a computer system? | [6] |
| | OR | |
| | Which are various components of computer system? Explain any 3 of them in brief | |
| 2) | a) Which are various symbols used while drawing a flowchart? Draw flowchart to check largest of two numbers. | [6] |
| | b) Demonstrate switch case and if-else branching using syntax and example | [6] |
| 3) | a) Explain for loop and while loop with syntax and suitable example. | [6] |
| | b) i. Write algorithm to Calculate area and perimeter of circle | [3] |
| | ii. Write algorithm to check if given number is even or odd | [3] |
| 4) | a) What do you mean by operator precedence? | [2] |
| | b) Which are various logical operators? Explain with syntax | [4] |
| 5) | a) Write a program in C to print if given number is prime or not | [4] |
| | OR | |
| | Write a program to print sum of digits in given number. | |
| | b) i. How to declare 1-D and 2-D array in C? Explain using syntax. | [4] |
| | ii. Write a program to perform addition of two matrices. | [4] |
| 6) | a) Write a program to demonstrate selection sort | [6] |
| | OR | |
| | Explain insertion sort with suitable example. | |
| | b) What do you mean by order of complexity? Which are various notations used to represent complexity? How do you find complexity of an algorithm? | [6] |

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