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K. J. Somaiya Institute of Technology, Sion, Mumbai-22
(Autonomous College Affiliated to University of Mumbai)

July-August 2025

~~May-June 2025~~

Supplementary

Program: B.Tech Scheme: III

Regular Examination: FY Semester: II

Course Code: BSC205 and Course Name: Computer Programming

Date of Exam: **05/08/25**

Duration: 02.5 Hours

Max. Marks: 60

Instructions:

- (1) All questions are compulsory.
- (2) Draw neat diagrams wherever applicable.
- (3) Assume suitable data, if necessary.

Q. No.	Question	Max. Marks	CO	BT level
Q 1	Solve any two questions out of three: (05 marks each)	10		
a)	Explain the terms variables and constants. How many types of variables are supported by C?		CO1	U
b)	Write a C program to check entered number is prime or not.		CO2	Ap
c)	Write a C program that calculates the factorial of an integer using recursion		CO3	Ap
Q 2	Solve any two questions out of three: (05 marks each)	10		
a)	Explain operations that can be performed on strings (at least 5).		CO4	U
b)	Explain Union in detail with example.		CO5	U
c)	Explain the result of following code snippet with justification: int num1=2,num2=3; int *p = &num1,*q = &num2; *p++ = *q++ a) What are the values of num1,num2 and *p,*q after this code executes? b) Explain the result with justification, especially focusing on the use of the post-increment operator (p++, q++).		CO6	Ap
Q.3	Solve any two questions out of three. (10 marks each)	20		
a)i	Write a program to find largest of three numbers using ternary operator		CO1	Ap
ii	Find the output of the following program #include<stdio.h> void main()			An

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	<pre> { int x = 10,y,z; z = y = x; y--x; z=x--; x--x-x--; printf("x = %d y = %d z = %d",x,y,z); } </pre>			
b)	Write a program in C to find the sum of digits using do-while loop.		CO2	Ap
c)	Explain all the storage classes in C with example		CO3	U
Q.4	Solve any two questions out of three. (10 marks each)	20		
a)	Write a program to count the number of digits, alphabets, and special characters in an input string.		CO4	Ap
b)	Define a structure called Player with data members: Player name, team name, batting average. Create array of objects, store information about players, sort and display information of players in descending order of batting average.		CO5	Ap
c)	Write a C program that copies the contents of one text file into another.		CO6	Ap
