

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

May-June 2026			
Program: B.Tech. (Basic Sciences and Humanities) Scheme: III			
Regular Examination: FY Semester: II			
Course Code: BSC205 and Course Name: Computer Programming			
Date of Exam: <u>30/05/26</u>	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)	Write a C program to calculate the area and perimeter of a rectangle using basic input and output operations.		CO1	AP
b)	Differentiate between if-else ladder and nested if-else with suitable examples.		CO2	AN
c)	Differentiate between call by value and call by reference with examples.		CO3	AN
Q 2	Solve any two questions out of three: (05 marks each)	10		
a)	Analyze the use of strlen(), strcpy(), strcmp() and strcat() functions with examples.		CO4	AN
b)	Explain nested structures with syntax and example.		CO5	U
c)	Write a C program to swap two numbers using pointers.		CO6	AP
Q.3	Solve any two questions out of three. (10 marks each)	20		
a)	Write a C program using an array of structures to store and display 5 student details such as Roll Number, Name, Department, Semester and Marks obtained in three subjects. Also calculate the total and percentage.		CO4	AP
b)	Explain dynamic memory allocation in C using malloc(), calloc(), realloc(), and free().		CO6	U
c)	Write a C Program to copy content of one file to another file		CO6	AP

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Q.4	Solve any two questions out of three. (10 marks each)	20		
a)	Explain keywords, identifiers, constants and variables in C language with suitable examples and rules for naming identifiers.		CO1	U
b)	Write a menu-driven C program using switch statement to perform arithmetic operations such as addition, subtraction, multiplication and division.		CO2	AP
c)	Explain recursive functions and write a recursive C program to find the factorial of a number		CO3	U
