

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

April – May 2023 B.Tech / Program: FY(All)_Scheme I/II: I Examination: <u>FY</u> Semester: <u>II</u> Course Code: <u>1UBSC205</u> and Course Name: <u>Computer Programming</u>		
Date of Exam: 05/06/2023	Duration: 03 Hours	Max. Marks: 60

Instructions: (1) All questions are compulsory. (2) Draw neat diagrams wherever applicable. (3) Assume suitable data, if necessary.				
		Max. Marks	CO	BT level
Q 1	Solve any six questions out of eight:	12		
i)	What is an algorithm? Write an algorithm to check if given number even or odd	02	CO1	Ap
ii)	Explain a) continue statement b) break statement	02	CO2	Un
iii)	What is the difference between function declaration and definition	02	CO3	An
iv)	What is an array? State various ways of array initialization?	02	CO4	Un
v)	Write a C program to count the number of Upper Case and Lower Case Characters from a given sentence.	02	CO4	Ap
vi)	Explain the structure of a C program.	02	CO5	Un
vii)	What are the primitive data types in C?	02	CO1	Un
viii)	State any 2 library functions in math.h along with example	02	CO2	An
Q.2	Solve any four questions out of six.	16		
i)	Explain various Bitwise Operators in C Programming Language.	04	CO1	Un
ii)	Develop a C Program for Interactive Calculator Using Switch Case Statement WAP to implement calculator with following operation Add 2 Number ii) Subtract 2 number iii) Division 2 number iv) Multiply 2 number.	04	CO2	Ap
iii)	Explain storage class with an example.	04	CO3	Un
iv)	Explain various String Functions in C Programming with suitable examples.	04	CO4	Un
v)	What do you mean by nested structure? Differentiate between Structure & union	04	CO5	Un

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vi)	Define a structure Employer with following variables (i) Employee code (ii) Employee name (iii) Employee salary (iv) Employee designation. -Write a program to read the structure for 05 employees and display them.	04	CO5	Un
Q.3	Solve any two questions out of three.	16		
i)	Explain in brief ternary operators. Develop a program to find the largest of given 3 numbers using ternary operator.	08	CO1	Ap
ii)	Develop a program to find the transpose of a matrix of size m*n.	08	CO4	Ap
iii)	Write a complete program to implement a structure to store the details of 50 students and sort and display the information of students in descending order of their percentage. Student details include. i)Roll number ii)Student Name iii)percentage	08	CO5	Ap
Q.4	Solve any two questions out of three	16		
i)	What is recursion? Develop a program using recursion to find the factorial value of given integer number.	08	CO3	Ap
ii)	Explain Nested loops in C. Develop a program to check whether a given number is palindrome or not i.e if no is 12421 is a palindrome.	08	CO2	Ap
iii)	Explain call by reference? Develop a C program to swap the values of two variables using call by Reference.	08	CO4	Ap
