Date 18/07/22

**K. J. Somaiya Institute of Engineering and Information Technology, Sion, Mumbai-22**
**(Autonomous College Affiliated to University of Mumbai)**
**End Semester Exam**
May 2022 – June 2022
B.Tech Program: Basic Science and Humanities
Examination: FY Semester: II
Course Code: 1UBSC105 and Course Name: C Programming
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)** | Draw flowchart to find largest of Three Numbers. | **2** | CO1 | U |
| **ii)** | Explain Logical AND Operator. Give Syntax. | **2** | CO1 | U |
| **iii)** | Explain nested if and else if ladder statement with syntax. | **2** | CO2 | U |
| **iv)** | Explain Role of Continue Statements with help of Example. | **2** | CO2 | U |
| **v)** | What are actual parameters and formal parameters? | **2** | CO3 | U |
| **vi)** | Explain the declaration and initialization of two-dimensional arrays with an example. | **2** | CO4 | U |
| **vii)** | Explain any one string library functions with syntax and example. | **2** | CO4 | U |
| **viii)** | Explain the C syntax of structure declaration with example. | **2** | CO5 | U |
| **Q.2** | **Solve any four questions out of six.** | **16** | | |
| **i)** | Write a program in C to print the numbers from 1 to 9 and their Cubes. | **4** | CO1 | Apply |
| **ii)** | Difference with example While and Do While Loop. | **4** | CO2 | Apply |

| | | | | |
|---|---|---|---|---|
| iii) | Write a C program that takes operator '+', '– ', '* ', '/ ', and two operands. Perform using switch statement. | 4 | CO2 | Apply |
| iv) | Write a program using function to find sum of digits of a given number. | 4 | CO3 | Apply |
| v) | Write an algorithm and develop a C program that reads N integer numbers from array and arrange them in ascending order. | 4 | CO4 | Apply |
| vi) | Differentiate between structures and unions. | 4 | CO5 | Apply |
| **Q.3** | **Solve any two questions out of three.** | **16** | | |
| i) | Write algorithm and prepare flowchart for to read the five subjects marks of student and classify them into grades.<br>Distinction – <=75,<br>First class 75>Grade>=60,<br>Second Class – 60>grade>=50,<br>Pass Class – 50>grade>=40<br>FAIL – grade<40 | 8 | CO1 | Apply |
| ii) | Write a program to generate pattern.<br>P<br>P Q<br>P Q R<br>P Q R S | 8 | CO2 | Apply |
| iii) | Write a program in C++ to calculate the sum of the series (1*1) + (2*2) + (3*3) + (4*4) + (5*5) + ... + (n*n). | 8 | CO2 | Apply |
| **Q.4** | **Solve any two questions out of three.** | **16** | | |
| i) | Write a program to generate Fibonacci Series using recursion in C. ( Fibonacci Series is 0 1 1 2 3 5 8 13 21 34 55 89 144 233 377) | 8 | CO3 | Apply |
| ii) | WAP for display sum of diagonal and non-diagonal elements of matrix. | 8 | CO4 | Apply |
| iii) | Write a program using structure for display Cricketer Information like name, Total no. of matches, Total Run, Batting Average, Total wicket etc. | 8 | CO5 | Apply |