

## BALLARI INSTITUTE OF TECHNOLOGY &amp; MANAGEMENT

(Autonomous Institute under Visvesvaraya Technological University, Belagavi)

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Course Code

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First Semester B.E. Degree Examinations April/May 2023

**INTRODUCTION TO C PROGRAMMING**

Duration: 3 hrs

Max. Marks: 100

**Note:** 1. Answer any FIVE full questions, choosing ONE full question from each module.  
2. Missing data, if any, may be suitably assumed

<u>Q. No</u>	<u>Question</u>	<u>Marks</u>	<u>(RBTL:CO: PI)</u>
<b>MODULE – 1</b>			
1.	a. Describe organisation of computer with neat block diagram?	04	(1 :1: 1.3.1)
	b. Write a short note on keyboard and scanner	10	(2 :1: 1.3.1)
	c. Explain the different phases of software development Lifecycles	06	(2 :1: 1.3.1)
<b>OR</b>			
2.	a. Describe the structure of C program?	04	(1 :2: 1.3.1)
	b. Explain the different files used in C program?	06	(2 :2: 1.3.1)
	c. Write a short note on printf() and scanf()	10	(2 :2: 1.3.1)
<b>MODULE – 2</b>			
3.	a. List the different Categories of operators C language supports and explain any two categories with examples	08	(2 :2: 1.3.1)
	b. Write a program to find the largest of three numbers using ternary operator	06	(2 :2: 2.4.4)
	c. Using the precedence chart evaluate the following expressions Assume int a=0,b=1,c=-1 i) a += b -= c *= 10 ii) --a *(5 + b) / 2 - c++ * b	06	(2 :2: 2.4.1)
<b>OR</b>			
4.	a. Write a c Program to print the following pattern 1 1 2 1 2 3 1 2 3 4 1 2 3 4 5	06	(2 :2: 2.4.4)
	b. Explain switch statement with flowchart and example	06	(2 :2: 1.3.1)
	c. Explain the on the following statements with an example i) break ii) continue iii) goto	08	(2 :2: 1.3.1)

### MODULE – 3

5. a. Explain the call by value and call by reference related to functions with examples **08** (2 :5: 1.3.1)  
b. Compare the different storage classes available in C language **06** (2 :5: 1.3.1)  
c. Explain the concept of recursive function with examples **06** (2 :5: 1.3.1)

**OR**

6. a. What is array and explain points to remember while declaring an array **06** (2 :3: 1.3.1)  
b. Given an array int marks[]={99,67,78,56,88,90,34,85} calculate the address of marks[4] and marks[6] if base address is 1000. **04** (2 :3: 2.4.1)  
c. Write algorithm and program to implement linear Search in array **10** (2 :3: 1.3.1)

### MODULE – 4

7. a. Explain the concept of passing Two dimensional arrays to functions **06** (2 :3: 1.3.1)  
b. Write a short note on Multi-dimensional Array **04** (2 :3: 1.3.1)  
c. Write a program to transpose 3\*3 Matrix **10** (2 :3: 2.4.4)

**OR**

8. a. Write a program to enter n numbers in an array and sort an array using Bubble sort **10** (2 :3: 2.4.4)  
b. Explain how reading and writing string with examples **10** (2 :3: 1.3.1)

### MODULE – 5

9. a. Explain the following terms: **10** (2 :3: 1.3.1)  
i) sscanf ii) fixed length string iii) delimited String  
b. Explain the following string functions **10** (2 :3: 1.3.1)  
i) strlen ii) strcat iii) strcmp iv) strstr

**OR**

10. a. What is pointer and explain declaring a pointer variable **08** (2 :4: 1.3.1)  
b. Define structure explain with examples **06** (2 :4: 1.3.1)  
c. Define the terms related to memory **06** (2 :4: 1.3.1)  
i) stack ii) heap iii) Global memory

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