PAPER ID-421232

Roll No: | | | | | | | | | | | |

BTECH
(SEM II) THEORY EXAMINATION 2021-22
PROGRAMMING FOR PROBLEM SOLVING

Time: 3 Hours   *Total Marks: 100*
Note: Attempt all Sections. If you require any missing data, then choose suitably.

SECTION A

1.   **Attempt *all* questions in brief.**   **2x10 = 20**

Qno	Questions	CO
(a)	What do you mean by command line arguments?	5
(b)	Explain strlen() and strcpy() function with example.	4
(c)	What do you mean by linked list?	5
(d)	What do you mean by function prototype?	3
(e)	Describe the use of logical AND and logical OR operators in C with example.	2
(f)	Write down the difference between syntax error and logical error.	1
(g)	What is algorithm? Discuss its characteristics.	1
(h)	Why we use do while loop in C?	3
(i)	Differentiate between structure and union.	4
(j)	Explain Bitwise operator with example.	2

SECTION B

2.   **Attempt any *three* of the following:**   **10x3 = 30**

Qno	Questions	CO
(a)	Explain Basic data type with their size and range and format specifier.	1
(b)	Write a program to find the largest of three numbers using conditional operator.	2
(c)	Write a program to print the following pattern. 1 22 333 4444	3
(d)	Write a program to store a record of 100 student like name, marks and roll number and print using structure.	4
(e)	Explain DMA along with their all function in detail.	5

SECTION C

3.   **Attempt any *one* part of the following:**   **10x1 = 10**

Qno	Questions	CO
(a)	What is operating System? Explain its type.	1
(b)	What is meant by type conversion? Explain about implicit and explicit type conversion with examples.	1

4.   **Attempt any *one* part of the following:**   **10x1 = 10**

Qno	Questions	CO
(a)	Write a Program to print the all prime numbers between 1 to 500.	2
(b)	What do you mean by Operator precedence and operator associativity?	2

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5.   **Attempt any *one* part of the following:**   **10x1 = 10**

Qno	Questions	CO
(a)	Write a program to find the sum of N natural number using recursion.	3
(b)	What do you mean by call by value and call by reference? Write a program to read two integers X and Y and swap the contents of the two variables X & Y using pointers.	3

6.   **Attempt any *one* part of the following:**   **10x1 = 10**

Qno	Questions	CO
(a)	Write a program to find maximum and minimum element of an array.	4
(b)	Write a program to find the number of vowels in a string.	4

7.   **Attempt any *one* part of the following:**   **10x1 = 10**

Qno	Questions	CO
(a)	Explain the role of C-pre-processor. What is Macro? And advantages of using macro definitions in a program. Give an example.	5
(b)	List out various file opening modes in C. Write a program to copy the content from one file to another file.	5