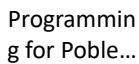



Tuesday, 28 October 2025 9:45 AM



 PAPER ID-311619		Printed Page: 1 of 2 Subject Code: BCS101	
Roll No: _____			
BTECH (SEM I) THEORY EXAMINATION 2023-24 PROGRAMMING FOR PROBLEM SOLVING			
TIME: 3HRS		M.MARKS: 70	
Note: 1. Attempt all Sections. If require any missing data, then choose suitably			
SECTION A			
1. Attempt all questions in brief.		2 x 7 = 14	
Q no	Question	Marks	C O
a	Define Syntax. Write the importance of Syntax in programming	2	1
b	Draw the Memory Hierarchy according to the Access time	2	1
c	Differentiate Between Operator and Operands	2	2
d	Define Conditional Operator with an example.	2	2
e	Find the Output of Code: <pre>void main() { int a, b; for (a = 6, b = 4; a <= 24; a = a + 6) { if (a % b == 0) { printf("%d", a); } printf("%d", a); } }</pre> <div style="margin-left: 400px;">6,</div> <div style="margin-left: 300px; color: red;"> continue; break; → printf("%d", a); x 6 18 30 </div>	2	3
f	Write the importance of base value in recursive function.	2	4
g	Predict the output of following program <pre>#include<stdio.h> int main() { int a = 12; void *ptr = (int *)&a; printf("%d", *ptr); getchar(); return 0; }</pre>	2	5
SECTION B			
2. Attempt any three of the following:		7 x 3 = 21	
a.	Explain the Storage Classes used for the storage of the Data in C programming	7	1
b.	Discuss the Concept of Type Casting and Type Conversion with the Program.	7	2
c.	Write a program to print the pattern <pre> * * * * * * * </pre>	7	3



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d.	Write a Program to print the Fibonacci Series up to the user's choice with the process in which the function calls itself	7	4
e.	Write the Short notes on (i) Linked list (ii) macros	7	5

SECTION C

3. Attempt any *one* part of the following: 7 x 1 = 7

a.	Explain the Digital Computer with proper architecture	7	1
b.	Define Algorithm. Write the Algorithm for the greatest of three numbers and Draw its flow chart.	7	1

4. Attempt any *one* part of the following: 7 x 1 = 7

a.	Illustrate the Concept of Operator Precedence and Associativity with Example.	7	2
b.	Write a Program to discuss the use of break in Switch Statement.	7	2

5. Attempt any *one* part of the following: 7 x 1 = 7

a.	Write a Program to check whether the entered number is prime or not.	7	3
b.	Write a Program to print the multiplication of two-dimensional matrices with m*n dimensions.	7	3

6. Attempt any *one* part of the following: 7 x 1 = 7

a.	Write a Program to print the greatest number of an array using the array passing to function concept.	7	4
b.	Define Sorting. Explain the Bubble sort technique and write the Program to implement the bubble sort.	7	4

7. Attempt any *one* part of the following: 7 x 1 = 7

a.	Define file. Write the modes of file handling. Write a program in C to write multiple lines to a text file.	7	5
b.	Define calloc function. Write the Program to print the sum of elements initialized at the dynamic memory allocated by the user.	7	5

```
#include <stdio.h>
```

```
void fib(int n, int f1, int f2, int f3)
{
    if (n > 0)
    {
```

n=5 0 1 1 2 3

n f1 f2 f3
fib(5, 0, 1, 1)
... ..