Total No. of Questions – [4]

Total No. of Printed Pages 02

G.R. No.	

Paper code - U118-109 CB (T1)

OCTOBER 2018 / IN - SEM (T1)

F. Y. B.TECH. (COMMON) (SEMESTER - I)

COURSE NAME: Computer Fundamentals(CB)

(2018 PATTERN)

Time: [1 Hour] [Max. Marks: 20]

Marking scheme and Solution

Sr. No.	Question	Marks	Solution
Q1	**Attempt any two**		
a)	What is Operating System? Enlist and explain the functions Operating system.	4	Definition operating system- [1 Mark] Enlist Functions- [1 Mark] Explanation of all functions- [2 Marks]
b)	Write a pseudo code and flowchart for "table of 2".	4	Pseudo code –[2 Marks] Flowchart- [2 Marks]
c)	What is an interpreter? How does it differ from a compiler? And relate with linker and loader.	4	Interpreter definition- [1 Marks] Differ from Compiler- [1 Marks] Relate with linker- [1 Marks] Relate with loader- [1 Marks]
Q2	**Attempt any two**		
a)	Explain loop statements with example?	4	List different loops- [1 Marks] For, do...while, while Explanation of each- [1 Marks](Total 3 Marks)
b)	Write a Program to print ASCII values of A to Z characters.	4	C program with header file, syntax, correct logic and expected output A to Z character ASCII value- Each has – [1 Marks].
c)	Write a program to determine whether a given number is 'odd' or 'even'.	4	C program with header file, syntax , correct logic and expected output odd /even number- Each has – [1 Marks]
Q3	**Attempt any one**		
a)	Given array is : 42 29 75 11 65 ,	4	Using bubble sort algorithm

	sort given array using bubble sort algorithm in ascending order and find result after 2 passes completion ?		in ascending order and find result after 2 passes- [3 Marks] . Specific output after 2 pass array- [1 Mark].

b)	Find time complexity of given program :
	void main()
	{
	int i, j, n, a=1;
	printf("|n Enter the value of Number=");
	scanf("%d", &n);
	for(i=0; i<n; i++)
	{
	for(j=0; j<n; j++)
	{
	a=a+5;
	printf ("a=%d", a);
	}
	}
	}
			Find time complexity of each step: [4 Marks]
			1. Time complexity=1
			2. Time complexity=1
			3. Time complexity(for)=n
			4. Time complexity(for)=n(n+1)
			5. Time complexity=n^2
			Total Time complexity
			$=1+1+n+n(n+1)+n^2$
			$=2+n+n^2+n+n^2$
			$=2+2n+2(n^2)$
			Time complexity $=O(n^2)$