Course code: FEC205   Course Name: Structured Programming Approach
Time: 2 Hr 30 Mins   **Max. Marks: 80**

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Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry 2 marks each.
1.	Which among the following is a Conditional Operator in C ?
Option A:	?:
Option B:	:?
Option C:	<=
Option D:	>=
2.	Which storage class is called as default storage class?
Option A:	auto
Option B:	register
Option C:	static
Option D:	extern
3.	Which among the following is an exit controlled loop?
Option A:	for
Option B:	while
Option C:	do….while
Option D:	if …else
4.	In the following initialization what is value of A[5] ? int A[10] = {9, 8, 7, 6, 5, 4, 3, 2, 1, 0};
Option A:	5
Option B:	4
Option C:	3
Option D:	2
5.	Recursion is a process in which a function calls _____.
Option A:	Itself
Option B:	another function
Option C:	main() function
Option D:	sub program
6.	Which data type is best for storing a number 65000 in a 32-bit system?
Option A:	int
Option B:	long
Option C:	signed short
Option D:	unsigned short
7.	What is value of a in following expression? int a = 10 + 4.867;
Option A:	10

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Option B:	14
Option C:	14.867
Option D:	14867

8.	What will be the out put of following Program when user hits 1 as input
	
	``c
	#include <stdio.h>
	void main()
	  {
	     int ch;
	     printf("enter a value between 1 to 2:");
	     scanf("%d", &ch);
	     switch (ch)
	     {
	       case 1:
	         printf("1\n");
	         printf("hi");
	         break;
	         printf("hi");
	       default:
	         printf("2\n");
	     }
	  }
	``

Option A:	hi
Option B:	1 hi
Option C:	2
Option D:	hi 1

9.	A Pointer is
Option A:	A Keyword Used to create Variables
Option B:	A variable that store address of an Instruction
Option C:	A variable that stores address of other Variable
Option D:	Imaginary Value

10.	What will be the output of the following program?
	
	``c
	int main( )
	{
	int a,b,c,d,e,f,g,h,k;
	a=8, b=4, c=2, d=1, e=5, f=20;
	printf("%d\n",a+b-(c+d)*3%e+f/9);
	return 0;
	}
	``

Option A:	10
Option B:	9
Option C:	8
Option D:	20

Q2	Solve any Two	(10 Marks each)
a)	Write an algorithm and a draw flowchart whether the entered number is an Armstrong or not.	
b)	Write a C-program to create array of structures in order to store details of almost 100 books. The book details are book name, book price, book page number and book author name.	

c)	Write a short Note with example on following (Any Two) 1. Primitive Data Types in C 2. Arithmetic and Logical Operator in C 3. Arrays in C 4. Pointers in C

Q3	Solve any Two	(10 Marks each)
a)	Write a program to find largest and smallest elements of an array.	
b)	What are strings and give any four string related functions with suitable example.	
c)	Write a C program to display following pattern using nested loops. 1 2 1 3 2 1 4 3 2 1 5 4 3 2 1	

Q4	Solve any Two	(10 Marks each)
a)	What is recursion? Write a program using recursion to find the factorial value of given integer number.	
b)	Explain call by value and call by reference with suitable example.	
c)	Write an algorithm to find the average of 10 numbers, also draw a flowchart to find average of 10 numbers.	