MODEL QUESTION PAPER

Programme name :Computer Engineering   **Semester: Three**

Course code: **Course name:**
 Programming in C

Time : 3 Hours   *Max.Marks : 75*

1. **Answer all the following questions**   **(9 x 1 = 9 Marks)**

1	------ variables are defined in outside the main() function	M 1.05	R
2	What happens while executing the statement # define PI 3.14	M 1.02	U
3	A character array always ends with---------	M 2.05	R
4	Apply ---------built in function to get the length of a string	M 2.06	U
5	Give an example for divide and conquer sorting algorithm	M 2.03	R
6	--is used as indirection operator	M 3.01	R
7	Give an example for pointer array declaration	M 3.04	U
8	A--------- data type is a collection of one or more variables of different data types	M 4.01	R
9	--------------------searches the disk for opening of the file	M 4.07	R

2. **Answer any Eight questions from the following**   **8 x 3= 24 Marks)**

1	Illustrate "call by value " method in the user defined function	M 1.03	U

2	Write output of following program.
	void count();
	int main(){
	  int i;
	  for(i=1;i<=3;i++)
	    count();
	}
	void count(){
	  static int x =0;
	  x =x+1;
	  printf("%d\n",x);
	}
		M 1.04	U

3	Compare linear search and binary search algorithms	M 2.04	U

4	Explain how strings are represented in C. Also describe the method to read a string from the terminal and output to screen.	M 2.05	U
5	Explain passing arrays to function with the help of example	M 2.07	U

6	Void main()
	{char name[15],*ch;
	gets(name);
	while(*ch!='\0')
	{printf("%c\n",*ch);
	ch==;
	}
	}
	Find the output and give explanation
		M 3.04	U

7	What is dynamic memory allocation. Write the library function to allocate memory dynamically. Give an example.	M 3.03	U
8	Explain arithmetic operations with pointers	M 3.01	R
9	Explain command line argument with the help of an example	M 4.08	U
10	What is a structure. How a structure is declared. State the difference between a structure and an array.	M 4.01	R

3. Answer all questions from the following   (6x 7 = 42 Marks)

1	a)Write the output of the following program
	Void main()
	{ auto int v=10;
	call2();
	Printf("v=%d",v);
	
	Void call1()
	{auto int v=20;
	Printf("v=%d",v);
	}
	
	Void call2()
	{auto int v=30;
	call1();
	Printf("v=%d",v);
	}
		M 1.05	U

	b)Justify your answer		
	OR		

2	Main()
	{int n=5;
	printf("%d",f(n));
	}
	int f(n)
	{if(n==1)
	return(1);
	else
	return(n*f(n-1);
	}
	
	a)Write the output of the above program
	
	b) Explain the execution procedure for getting the output of the above program
		M 1.07	U

3	Write a program to do the following a)read a number using a function read() b)check the inputted number is prime or not using the function prime() c)output the inputted number is prime or composite using the function write()	M 1.04	A
	OR		
4	Write a recursive function to find GCD of two numbers (For eg GCD of numbers 10 and 15 is 5)	M 1.08	A

5	Write a program to do the following
	    a)Read two matrices from keyword
	    b) Check if matrix addition is possible
	    c) If possible ,find their sum
	d) Print the sum matrix.
		M 2.02	A

	OR		
6	Write a program to implement selection sort algorithm and trace out with the following values 10,2,20,3,7,1,50,5,6	M 2.04	A
			A

7	Write a program for the following a) Declare a character array of pointers containing 10 addresses b) Allocate spaces for storing 20 names c) Read 20 names and store in the array d) Write 20 names from the array	M 3.05	
	OR		

8	Write a program to do the following
	  a) Declare a single pointer to represent a numeric single dimensional array
	  b) Allocate space and store the first address to pointer
	  c) Read 10 numbers to array (use the above pointer)
	  d) Write elements from array (use the above pointer)
		M 3.05	A

9	Explain about command line argument .Give an example	M 4.08	R
	OR		
10	Explain the various steps in sequential file processing	M 4.07	R
11	Given names, roll numbers and grades of three students. Write a program to do the following a)Declare the structure b)Create an array of structure objects c)Read the contents of the array d)Display the contents of array	M 4.03	A
	OR		
12	Given name, author and publisher of a book. Write a program to a)Declare a structure with given details b)Declare a pointer to this structure c)Read the contents using this pointer d)Display the contents using this pointer	M 4.05	A

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Mark Distribution

Module	Hours/Module (hi)	Marks/Module (hi/∑Hi) * 123 (±5%)	Type of Questions							
			Part A		Part B		Part C		Total	
			No. of questions	Marks	No. of questions	Marks	No. of questions	Marks	No. of questions	Marks
1	11	31	2	2	2	6	4	28	7	36
2	11	31	3	3	3	9	2	14	9	26
3	10	30	2	2	3	9	2	14	7	25
4	11	31	2	2	2	6	4	28	8	36
Total	43	123	9	9	10	30	12	84	31	123

Cognitive Level Distribution

Cognitive Level	Marks	% of Marks
Remembering	26	22
Understanding	41	33
Applying	56	45
Total	123	100