

KADI SARVA VISHWAVIDHYALAYA

Subject Code:-CC109
Date:-

B.E. Semester-I ME/AE/IT/EE.
Subject name:-FUNDAMENTAL OF PROGRAMMING
Time:- Total Marks:-70

Instruction:

1. Answer each section in separate Answer sheet.
2. Use of Scientific Calculator is permitted.
3. All questions are Compulsory.
4. Indicate Clearly, the options you attempt along with its respective question number.
5. Use the last page of main supplementary of rough work.

Section-I

Q-1 (All compulsory)

- (A) Write a C Program to calculate the area of a Circle. The formula to [5] calculate the area is: Area = $\pi \times r^2$ where r is the radius of the circle & π value is 22/7
- (B) State and explain features of C language. [5]
- (C) What is flowchart? Draw a flowchart to find largest among three numbers. [5]

OR

- (C) Explain different types of operators used in 'C'. [5]

Q-2 Answer the following Questions.

- (A) Draw block diagram of computer system. Explain each part of it. [5]
- (B) What is Type conversion and Type casting? State difference between them. [5]

OR

- (A) What will be the output of following program? [5]

main()	main()
{	{
int x = 10, y, z;	int i;
z = y = x ;	for(i=5;i<15;i++)
y = x-- ;	{
z = --x ;	printf("%d\n",i);
x = --x - x-- ;	i = i - 1;
printf(' y = %d z = %d x = %d ', y,	}
z, x) ; }	}

- (B) List and explain types of computer languages. [5]

Q-3 Answer the following Questions.

- (A) Write the basic differences between the while loop and do-while loop with [5] suitable example.

(B) Explain the break and continue statements using suitable example. [5]

OR

(A) Explain the multiple if (ladder if) with example. Give the example using it. [5]

(B) Write a C program check given string is palindrome or not. [5]

Section-II

Q-4 (All compulsory)

(A) Write a C program to Concatenate two strings. [5]

(B) Explain the difference between "call by value" and "call by reference" with suitable examples. [5]

(C) Write a program to reverse the number. (e.g. 456 -> 654) [5]

OR

(C) List the different file management functions and explain various file modes. [5]

Q-5 Answer the following Questions.

(A) Differentiate Structures and Unions with example. [5]

(B) Write a C Program to store information (Name, Roll No., and Marks) of 10 students using structure. [5]

OR

(A) State the benefits of object oriented programming over procedure oriented programming. [5]

(B) What is recursive function? Explain with suitable example. [5]

Q-6 Answer the following Questions.

(A) Write a C Program to print half pyramid as using * as shown in figure [5] below.

```
*  
**  
* * *  
* * * *  
* * * * *
```

(B) Explain scope and life time of variable. [5]

OR

(A) What is pointer in C? Give its benefits also explain Array of pointer with relative example. [5]

(B) Write a C program to add two 3X3 matrices. [5]

Kadi Sarva Vishwavidyalaya

BE Sem I

Subject: Fundamentals of Programming

Max Marks: 70

Instructions: (1) Answer each section in separate Answer sheet
(2) Use of scientific calculator is permitted

Section-I

Q.1

Each carries equal marks

[15]

- [A] Draw the block diagram of computer and explain functions of each part in brief
- [B] Give the difference between procedure oriented language and object oriented language. What are the drawbacks of machine and assembly language programming
- [C] What is the significance of void main () in C Language. Write down rules of variable name

OR

- [C] Explain sizeof operator and comma operator with the help of example. Explain type conversion in detail

Q.2

- [A] Write a C program to find highest between two given numbers using switch case
- [B] Write a C program to print addition of two 3x3 integer matrices

[10]

OR

Q.2

- [A] Write a C program to find highest among three given numbers using nested if
- [B] Write a C program to find length of given string

[10]

Q.3

- [A] Give the difference between break and continue with the help of program
- [B] Write a C program to print following using nested loop

[10]

1
0 1
1 0 1
0 1 0 1
1 0 1 0 1
0 1 0 1 0 1
1 0 1 0 1 0 1
0 1 0 1 0 1 0 1

OR

Q.3

- [A] List and explain string functions from <string.h>
- [B] Write a C program to print Fibonacci series (hint: if given number is 7 then series will be 1 1 2 3 5 8 13)

[10]

[P.T.O.]

Section II

Q.4 **Each carries equal marks** [15]

[A] Define the following terms:

1. Function
2. Pointer
3. Array
4. Recursion
5. Scope of variable

[B] Differentiate between

1. Local variable and Global variable
2. Global variable and Static variable

[C] Explain the difference between structure and union with the help of example

OR

[C] Give the difference between array and structure with the help of example

Q.5 [10]

[A] Explain following function prototypes:

1. void fun1(void)
2. void fun2(int [] , int)
3. float fun3(void)
4. int fun4(int ,int)
5. int* fun5()

[B] Write a C program to swap two integer numbers using pointer

OR

Q.5 [10]

[A] Write a function to compute the factorial of a given number

[B] Write a C program to read and print array of n elements using pointers

Q.6 [10]

[A] What do you mean by preprocessor? Explain it in detail

[B] Write a C program to copy the content of one file to another file

OR

Q.6 [10]

[A] What do you mean by polymorphism? Explain data encapsulation.

[B] Explain structure within structure

***** ALL THE BEST *****

KADI SARVA VISHWAVIDHYALAYA

B.E. Semester II / I

Subject code:- _____

Subject Name:- Fundamentals of programming

Date:- 30-5-13

Time:- 10:30 to 1:30

Total Marks:- 70

Instructions:

1. Answer each section in separate Answer sheet.
2. Use of Scientific calculator is permitted.
3. All questions are **Compulsory**.
4. Indicate **clearly**, the options you attempt along with its respective question number.
5. Use the last-page of main supplementary of **rough work**.

Section - I

Q-1 (All compulsory)

- (A) Draw the block diagram of computer architecture and explain [5] functions of each block.
(B) What is system software? List and explain five system software. [5]
(C) Explain various programming languages with its advantages and [5] disadvantages.

OR

- (C) Define flowchart. Draw flow chart to find factorial of given number. [5]

Q-2 Answer the following question.

- (A) Explain various operators used in C language. [5]
(B) Explain switch case with suitable example. [5]

OR

- (A) Define array. What are the advantages of array? Explain single and [5] multi-dimensional array with example.
(B) Explain for loop. Show use of break and continue statement by [5] example.

Q-3 Answer the following question.

- (A) Explain following string manipulation functions with its syntax and [5] example.
1.strcmp 2.strstr 3.strlen 4.strcat 5.strcpy
(B) Write a c program to generate following output. [5]

*

* *

* * *

* * * *

* * * * *

OR

- (A) What are different categories of functions? Explain with example. [5]
(B) Write a c program to generate Fibonacci series up to n given [5] numbers (n is input from user).

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Section – II

Q-4 (All compulsory)

- (A) Define recursion. Write a recursive function named factorial(x) to find factorial of a given x. [5]
(B) What is pointer? Explain array of pointer with suitable example. [5]
(C) What is structure? Give example. Differentiate structure and union. [5]

OR

- (C) Write a c program to copy the contents of one file into another. [5]

Q-5 Answer the following question.

- (A) Explain operator precedence and associativity by example. [5]
(B) Explain call by value and call by reference function calling methods with example. [5]

OR

- (A) Enlist various file management functions and explain the various file opening modes. [5]
(B) What is type conversion? Why it is needed? Explain implicit type conversion and explicit type conversion with example [5]

Q-6 Answer the following question.

- (A) Explain preprocessor directives categories with example. [5]
(B) Write a c program to swap two numbers using pointers. [5]

OR

- (A) Explain five important concepts of object oriented programming. [5]
(B) Define a structure named "Student" with roll_no, name and percentage as members. Read data of 5 students from user and display them in proper format. [5]

RO

-----All the Best-----

KADI SARVA VISHWAVIDHYALAYA

B.E. Semester-I I.T./EE/AE/ME

Subject Code:-CC 109

Subject name:-Fundamentals of Programming

Date:- 27.12.13

Time:- 3 Hrs.

Total Marks:-70

Instruction:

1. Answer each section in separate Answer sheet.
2. Use of Scientific Calculator is permitted.
3. All questions are **Compulsory**.
4. Indicate **Clearly**, the options you attempt along with its respective question number.
5. Use the last page of main supplementary of **rough work**.

Section-I

Q-1 (All compulsory)

- (A) Draw block diagram of computer system. Explain each part of it. [5]
(B) Draw the flowchart for finding Factorial of a number given by user. [5]
(C) List and explain fundamental data types of 'C' language. [5]

OR

- (C) Explain Relational Operators with example. [5]

Q-2 Answer the following Questions.

- (A) Explain if...else...if ladder with an example. [5]
(B) Explain goto statement with proper example. [5]

OR

- (A) Explain the use of break statement with example. [5]
(B) Explain Nested if...else statement with example. [5]

Q-3 Answer the following Questions.

- (A) Explain the difference between while and do-while loop. [5]
(B) Write a program to print following pattern. [5]

1
1 2
1 2 3
1 2 3 4
1 2 3 4 5

OR

- (A) Write a program to check whether entered number is prime or not. [5]
(B) Write a program to reverse a given integer number. [5]

Section-II

Q-4 (All compulsory)

(A) Write a program using array to find largest from n given numbers. [5]

(B) Find the output of below C code- [5]

```
void main()
{
    Char str1[20] = "India";
    Char str2[20] = "Is Great";
    strcat(str1,str2);
    printf("\n %s \n %s",str1, strrev(str1));
}
```

(C) Write a program to add first n numbers using user defined function (UDF). [5]

OR

(C) Write a program to find whether given number is odd or even using user defined function (UDF). [5]

Q-5 Answer the following Questions.

(A) Write a program to perform all the arithmetic operations on two numbers using User defined functions. [5]

(B) Find the output of following C code: [Assume &a=1000, &p1=2000, &p2=3000] [5]

```
Void main()
{
    int a = 10, *p1,**p2;
    p1 = &a;
    p2 = &p1
    printf("%d",++(*p1), p1, *p2,&(*p1),*(p2));
}
```

OR

(A) Write a program to find area of circle using User defined functions. [5]

(B) Write a program using User defined function to interchange values of two variables using pointer. [5]

Q-6 Answer the following Questions.

(A) What is structure? Define a structure and explain how to access the structure members. [5]

(B) Write short note on file operations in C [5]

OR

(A) Write a program to declare structure student having member's grade, name and roll number and access them in various ways. [5]

(B) State the difference between Structure and Union. [5]

Enrol. No							
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KADI SARVA VISHWAVIDHYALAYA

B.E. Semester- I (IT,ME,EE,AE)

DATE : 31/12/2014

TIME : 10:30 TO 1:30

TOTAL MARKS : 70

SUBJECT CODE: CC 109

FUNDAMENTALS OF PROGRAMMING

Instructions:

1. Attempt all Questions.
2. Figures to the right indicate full marks.
3. Indicate clearly, the options you attempt along with its respective Que.No.
4. Answer with neat sketches/block diagrams/flow charts, as required.

SECTION - I

Q-1. a) Draw a block diagram of computer system and explain functions of each part in brief. **5**
 b) Explain types of software in detail. **5**

c) Define flowchart. Draw the flowchart for finding factorial of a number given by user. **5**

OR

c) Explain relational operator and conditional operator with an example. **5**

Q-2. a) Explain if...else statement and else if ladder statement with an example. **5**
 b) Explain break statement with an example. **5**

OR

a) Explain while statement and do-while statement with an example. **5**
 b) Explain goto statement with an example. **5**

Q-3. a) Explain switch case statement with an example. **5**
 b) Write a program to print following pattern. **5**

```

1
2 2
3 3 3
4 4 4 4
5 5 5 5 5

```

OR

a) Explain for loop statement with an example. **5**
 b) Write a program to check whether entered number is armstrong or not. **5**

P.T.O.

SECTION - II

- Q-4.** a) Define array ? Explain one dimensional and two dimensional array with example. 5
b) Explain call by value and call by reference with example 5
c) Define recursion? Explain recursion with example? 5

OR

- c) Explain the difference between structure and union with help of example. 5

- Q-5.** a) Write a program to find sum and average of 5 numbers using array. 5
b) Write a output of given program:

```
main()
{
    float a,b,c,x,y,z;
    a=9,b=12,c=3;
    x=a-b/3+c*2-1;
    y=a-b/(3+c)*(2-1);
    z=a-(b/(3+c)*2)-1;
    printf("%f%f%f",x,y,z);
}
```

I-MOTC32

OR

- Q-5.** a) Write a user defined function to print whether entered number is odd or even. 5
b) Write a output of given program:

```
main()
{
    int i,n=10;
    for(i=1;i<=10;i++)
    {
        printf("%d * %d = %d",n,i,n*i);
    }
}
```

- Q-6.** a) List out categories of function and explain any one in detail. 5
b) Explain string function with example 5

OR

- Q-6.** a) Explain is pointer? Explain pointer with example. 5
b) Write a program to read and open file. 5

KADI SARVA VISHWAVIDHYALAYA
B.E. Semester-II May-2015 (CE, EC, CIVIL)

Date: 30/5/2015

Total Marks: 70

Time: 10:30 AM to 1:30 PM

Subject Code: CC109

FUNDAMENTALS OF PROGRAMMING

Instructions:

1. Answer each section in separate Answer sheet.
2. Use of scientific calculator is permitted.
3. All questions are **Compulsory**.
4. Indicate **clearly**, the options you attempt along with its respective question number.
5. Use the last page of main supplementary of **rough work**.

Section - I

Q-1 (All compulsory)

- (A) Explain the structure of a 'C' program with example. [5]
(B) Draw a flow chart to find the minimum of three numbers. [5]
(C) Explain shorthand operators and ternary operator with examples. [5]

OR

- (C) Explain increment-decrement operators and bitwise operators with example. [5]

Q-2 Answer the following questions.

- (A) Find output: [5]

1) float a, b, x, y; a=9, b=12; x= (a - b)/3 +5; y= a - b/3 +3; printf("%f %f %f", x, y, b);	2) int a, b, c, x, y; a=0, b = 5, c = 10; x = a && b c; y = c b a && a; printf("%d %d", x, y);
--	---

- (B) Explain islower() and isupper() functions with example. [5]

OR

- (A) Find output: [5]

```
float y=89.7389;  
printf("%7.4f % -7.2f %f\n", y, y, y);  
printf("%07.2f %e\n", y, y);
```

- (B) Explain isalpha() and isdigit() functions with example. [5]

Q-3 Answer the following questions.

- (A) Write a program to find sum of N numbers using goto statement. [5]
(B) Write a program to implement arithmetic calculator using else if ladder. [5]

OR

- (A) Write a program to print Fibonacci series up to N terms. [5]
(B) WAP to implement an arithmetic calculator using switch case (scan the choice of an operator and two numbers). [5]

PTO...

Section - II

Q-4 (All compulsory)

(A) Write a program to print the following pattern upto N rows.

[5]

1
2 3
4 5 6
7 8 9 10
...

(B) What is an array? Explain initialization of two dimensional arrays with [5] examples.

(C) Write a program to scan an array of N elements and sort the array in ascending [5] order.

OR

(C) Write a program to scan an array of N elements and search the given element [5] from the array.

Q-5 Answer the following questions.

(A) Differentiate between entry-controlled loop and exit-controlled loop using [5] examples.

(B) What is recursion? Write a program to calculate $N!$ using recursion.

OR

(A) Differentiate between structure and union using examples.

[5]

(B) Write a program to find whether entered number positive or negative using function. Function should return 1 if the number is positive and 0 if the number is negative.

Q-6 Answer the following questions.

(A) Write a program to swap two numbers using call by value and call by address.

[5]

(B) Write a program to copy the contents of one file into the other file.

[5]

OR

(A) What is pointer? Explain the advantages of pointer.

[5]

(B) Write a program to count the number of characters in a given file.

[5]

----- All the Best -----