

Programming with C

Q.P. Code :03595

[Time: 2 $\frac{1}{2}$]

[Marks:75]

Please check whether you have got the right question paper.

- N.B:
1. All questions are compulsory.
 2. Figures to the right indicate marks.
 3. Illustrations, in-depth answers and diagrams will be appreciated.
 4. Mixing of sub-questions is not allowed.

Q.1 Attempt all (each of five marks)

15

A Multiple choice questions

- i. What is difference between a declaration and a definition of a variable?
 - a. Both can occur multiple times, but a declaration must occur first.
 - b. There is no difference between them
 - c. A definition occurs once, but a declaration may occur many times
 - d. A declaration occur once, but a definition may occur many times

ii. Guess the output for following C code?

```
#include <stdio.h>
Int main(){
Int x=3, y=4, z=4;
Printf("%d", (z>y=y>=x?100:200));
Return 0;
}
```

- a. 100
 - b. 200
 - c. 0
 - d. 1
 - e. Complementation error
- iii. Consider the following code and guess the output
- ```
Int X=0; for(x=1;x<4;x++); printf("x=%d\n"x);
```
- a. X=0
  - b. X=1
  - c. X=3
  - d. X=4
  - e. X=5

iv. What will be output for following C code?

```
#include<stdio.h>
Int main(){
Float a=0.5,b=0.9;
If(a&& b>0.9)
Printf ("sachin");
Else
Printf("Rahul");
Return 0;
}
```

- a. Sachin
- b. Rahul
- c. Null
- d. Run time error
- e. Compilation error

v. Which one of the following is the valid function definition:

- a. `Void abc(int a,int b){  
  Int c;  
  .....  
  Return(c);  
}`
- b. `Int abc(int a, int b){  
  .....  
  .....  
}`
- c. `Int abc(int a, int b){  
  Double c = a+b;  
  Return(c);  
}`
- d. `Void abc (void){  
  .....  
  .....  
  Return;  
}`
- e. `Void abc(int a, int b)  
{  
  .....  
  .....  
  Return;  
}`

B Fill in the blanks

- a. The order of evaluation can be changed by using \_\_\_\_\_ in an expression.
- b. The ternary conditional expression using the expression using the operator?: could be easily coded using -----statement.
- c. An array created using malloc function at run time is referred as ----- array
- d. The function call `strcat (s2,s1);` upends -----to-----.
- e. The ----- statement first executes the loop body and then evaluates the loop control expression.

C Short Answers.

- a. Compare between implementing iterations using while and do-while.
- b. Describe use of `free()` for memory management in C language.
- c. Write a statement in C to allocate enough space to hold an array of 10 integers that are initialized to 0.
- d. List out any two formatted I/O functions in C programming.
- e. What is recursive function?

Q2 Attempt the following (Any three)

- a. Explain in brief the structure of C program.
- b. Write a c program to accept the number from user, if the entered number is greater than 100 then print that "your number is greater than 100" else print as "your print is smaller than 100".
- c. Write a c program to accept the input from user, if the user entered character display a message telling that it is an alphabet, for digit display as it is digit, or any other special character.
- d. State and explain while statement in c Programming with suitable example.
- e. Write a c program to check whether a VOWEL or CONSONANT using switch case and print the appropriate messages in the output.
- f. Write a C program to read the age of a candidate and determine whether it is eligible for casting his/her own vote.

- Q3 Attempt the following (Any three) 15
- Write a C program to find largest and smallest number in an array.
  - Explain working of gets() and puts() functions with suitable program.
  - Write a C program to perform concatenation operation of string with and without using strcat()
  - State an example : elements of user-defined functions.
  - Distinguish between global and local variable suitable example.
  - What is nesting of functions? Illustrate it with suitable example to explain the same.
- Q4 Attempt the following (Any three) 15
- What are pointers? State and explain benefits of using pointers.
  - Write dynamic memory management. Explain any one dynamic allocation function.
  - Write a c program to create an array of 3 elements for structure to store id, name, and percentage of student .Accept record from user and print the same.
  - Compare characteristics between C structure with python tuples.
  - Write a C program to store integer values in a file called 'INPUT'. Read INPUT file, perform file, perform addition of all even numbers in the file and print as the output
  - What does fseek() function does? Explain parameters of fseek() function. Also state the output for following fseek () statements.
    - fseek(fp,0L,0);
    - fseek(fp,m,0);
    - fseek(fp,m1);
    - fseek(fp,m1);
- Q5 Attempt the following (Any three) 15
- Explain with illustration working of GOTO statement.
  - What is mean by calling a function passing by reference?
  - Define fopen() function in detail.
  - Define following function.
    - getch()
    - getche()
  - Write a C program to copy the contents of one file into another.