

208 / 14CS (15) / Prog. 2014C  
Sem - II

April - 17

Q.P. Code :03594

[Time: 2½ Hours]

[Marks:75]

Please check whether you have got the right question paper.

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

Q1 Attempt All (Each of 5 marks)

15

- A
- i. Which is the only function all C program must contain?
    - a. start()
    - b. system()
    - c. main()
    - d. printf()
  - ii. We can insert pre written code in a C program by using
    - a. #read
    - b. #get
    - c. #include
    - d. #put
  - iii. A pointer is
    - a. A keyword used to create variable
    - b. A variable that stores address of an instruction.
    - c. A variable that stores address of other variable.
    - d. All of the above.
  - iv. The keyword used to transfer control from a function back to the calling function is
    - a. switch
    - b. goto
    - c. go back
    - d. return
  - v. Difference between structure and union is
    - a. We can define function within structure but nit within a union
    - b. We can define function within union but nit within a structure.
    - c. The way memory is allocated
    - d. There is no difference.

B Fill in the blanks

- a. An ----- constant refers to a sequence of digits
- b. A program consist of a for statement within another for statement, is called as -----
- c. A function that calls itself is known as a -----function
- d. The variable declared in a structure definition are called its -----.
- e. ----- Function is used to close a file.

C Short Answers.

- a. List arithmetic operators.
- b. What does "&" do in scanf()?
- c. What are arrays?
- d. What is functions prototype?
- e. List any two functions, which are used to manipulate string?

Q2 Attempt the following (Any three) (each of five marks)

15

- a. Write a short note on basis structure of C program.
- b. What is meant by formatted input and output?

- c. What are relational operators? Write a C program to show implementation of relational operators in c program?
- d. Discuss the concept of nesting of loop with an example.
- e. Write programs to print numbers from 1 to 20 in ascending order using do-while loop.
- f. What is null statement? Explain a typical use of it.

Q3 Attempt the following (Any three) (each of five marks)

15

- a. What are multi-dimensional arrays? How one can assess an array element? Explain with the help of an example.
- b. Briefly explain the working of following function.
  - getchar()
  - puts()
- c. What are strings? Write a c program to declare two string "computer" and "science", use an appropriate string manipulation function to display output as one string "computer science".
- d. How function declaration differs from function definition? Write a C program to show function calling by passing a value.
- e. Define recursion. Write a program to calculate factorial of a number entered by user, using recursion.
- f. Write a short note on global and local variable

Q4 Attempt the following (Any three) (each of five marks)

15

- a. What is pointer? How is pointer initialized?
- b. List different benefits of pointers
- c. How structures are initialized? How does structure differs from array?
- d. What is the use of dynamic memory allocation?
- e. Discuss the working of following functions
  - fopen()
  - fclose()
  - fprintf()
  - getw()
  - putw()
- f. Compare and contrast between c structures and python tuples.

Q5 Attempt the following (Any three) (each of five marks)

15

- a. Write a sort note on automatic and explicit type conversation
- b. Write a program which consist of a function and show the use of return statement.
- c. Write a program which uses nested structure.
- d. Compare static typing in c vs dynamic typing in python.
- e. Explain the following
  - malloc()
  - calloc()