

2014

Time : 3 hours

Full Marks : 80

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer from both the Groups as directed.

Group – A

(Objective Type Questions)

Answer all questions : $2 \times 10 = 20$

1. Choose the correct answer of the following :

(a) If c is a variable initialized to 0, how many times will the following loop be executed ?

While ((c > 0) & & (c < 60)) {c++; ;}

(i) 60

(ii) 59

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(iii) 61

(iv) 1

(b) Operator precedence determines which operator.

(i) Is most important

(ii) Operates on the largest numbers

(iii) Is used first

(iv) None of these

(c) If you don't initialize a static integer array, what will be the elements set to ?

(i) An undetermined value

(ii) A floating point number

(iii) Zero

(iv) None of these

(d) The meaning of `if(-1)` is :

(i) Always false

(ii) Always true

(iii) Both (i) and (ii)

(iv) None of these

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(2)

Contd.

(e) Which of the following is not part of string library ?

(i) `strcpy(st)`

(ii) `strlen(st)`

(iii) `strlen(st)`

(iv) `strvet(st)`

(f) If $x = -11$ and $y = -3$, what is the value of $x \% Y$?

(i) -3

(ii) 3

(iii) 2

(iv) -2

(g) Pick up the odd one out from the following :

(i) $x = -1$

(ii) $x -$

(iii) $x - = 1$

(iv) $x = x - 1$

(h) Which of the following directive creates functions like macros ?

(i) `#undef`

(ii) `#define`

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(3)

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- (iii) #ifdef
- (iv) #include

(i) Which is the correct way to declare a pointer ?

- (i) int_ptrx;
- (ii) int*ptr;
- (iii) *int ptr;

(iv) None of these

(i) A typecast is used to :

- (i) Force a value to be of a particular variable type
- (ii) Define a new data type
- (iii) Rename an old type
- (iv) None of these

Group – B

(Long-answer Type Questions)

Answer any four questions of the following :

$$15 \times 4 = 60$$

2. Distinguish between the following :

- (a) Array Variable and Enumerated Variable
- (b) Array and Structure

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(4)

Contd.

3. What is Flow Chart ? Define the symbols used in flow charts. Draw flow chart to find the average of 5 numbers.

4. Write a program in 'C' to calculate the factorial of any given number using recursive function.

5. Write a program in 'C' to sort the elements of array in descending order using Bubble Sort Technique.

6. What are pre-processors in C ? Explain each of them with simple examples.

7. (a) Write a program to find the length of a string using pointers.

(b) Describe the static variable with example.

8. Draw a flow chart and then write a 'C' program to enter the roll number and name of few students from the keyboard and write it to a "student.dat" file.

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(5)

(Turn over)

9. Explain the difference between parameter passing mechanisms "call by value" and "call by reference". Which is more efficient and why?

10. Write a 'C' program to display 2, 4, 6, 8, 10, 22, 24, 26 and 30 even numbers when the number entered by the user is 30.

