2015

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.

1. Choose the correct answer of the following :

2×10 = 20

(a) Which operator has the lowest precedence ?

(i) Size of

(ii) Unary

(iii) Assignment

(iv) Comma

(Turn over)

(b) Which operator cannot be used with float operands ?

(i) +

(ii) −

(iii) %

(iv) *

(c) The function that is invoked is known as :

(i) Calling function

(ii) Caller function

(iii) Called function

(iv) Invoking function

(d) The complexity of binary search algorithm is :

(i) 0(n)

(ii) 0(n²)

(iii) 0(nlog n)

(iv) 0(log n)

(e) Repalce ("XXXYYYZZZ", "XY", "AB") =

(i) XXABYYZZZ

(ii) XABYYYZZZ

(iii) ABXXXYYYZZZ

(iv) None of these :

(f) Pointers are used to create complex data structures like :

(i) Trees

(ii) Linked

(iii) Stack

(iv) Queue

(v) All of the above

(g) A structure can be placed within another structure and is known as :

(i) Self-referential structure

(ii) Nested structure

(iii) Paralel structure

(iv) Pointer to structure

(h) The enumerated type is derived from which data type ?

(i) Int

(ii) Float

(iii) Double

(iv) Char

(i) Which function is used to associate a file with a stream ?

    (i)   fread ( )

    (ii)   token ( )

    (iii) floes ( )

    (iv) fflush

(j) An array is :

    (i)   Randon access structure

    (ii)   Sequential access structure

    (iii) Both (i) and (ii).

    (iv) None of these

Group – B
(Long-answer Type Questions)

Answer any **four** questions of the following :

$$15 \times 4 = 60$$

2. Write a 'C' program to print the following pattern :

```
    1
   2 1 2
  3 2 1 2 3
```

3. (a) Differentiate between function declaration and function definition.

   (b) Explain the concept of recursive function with examples.

4. (a) Write a function that converts temp given in celsius into fahrenheit.

   (b) How is a two dimensional array represented in memory ?

5. (a) What do you understand by a Null pointer ?

   (b) Explain the term dynamic memory allocation.

6. (a) Differentiate between a structure and a union ?

   (b) Write a program to read and display the information about an employee using Nested structures.

7. (a) Differentiate between call by value and call by reference using suitable example.

   (b) Which technique of searching an element in the array do you prefer to use and in which situation ?

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