End Sem(III) —
BCA (CC – 5)

2021

Time : 3 hours

Full Marks : 60

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

(Compulsory)

1. Answer the following questions : 1×10 = 10

(a) What is multidimensional array ?

(b) What is circular linked list ?

(c) Write the limitation of recursion.

(d) Why are stack useful ?

(e) Define push and pop operation of stack.

(f) Define tree.

(g) What is hashing ?

(h) Write the difference between stack and queue.

(i) What is the need for hashing ?

(j) Write the example of non-linear data structure.

2. What do you understand by the term "data structure" ? Explain its usefulness. 5

Group – B

Answer any **three** questions of the following : $15 \times 3 = 45$

3. Explain what are Infix, Prefix and Postfix expressions. Explain with example.

4. What are the differences between array and linked list ? Explain single and doubly linked list with figure.

5. What is binary tree ? Explain different traversal algorithms of binary tree.

6. Write the differences between linear and binary search. How binary search will be performed on given list of 'N' elements, where N represents any number of elements ?

7. What is priority queue ? Explain the advantages of queue.