

--	--	--	--	--	--	--	--	--	--

Sixth Semester B.E. Degree Examination, Dec.2018/Jan.2019
Advanced Computer Programming

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions, selecting
at least TWO questions from each part.**

PART – A

- 1 a. Explain the following with an example :
 i) Template function ii) Dynamic memory Allocation iii) Recursive function
 iv) Value parameter v) Chain iterator class. (10 Marks)
 b. Explain Testing and Debugging with proper suggestion. (10 Marks)
- 2 a. What is an array? Explain abstract data type array. (08 Marks)
 b. Explain the following :
 i) Diagonal ii) Tridiagonal iii) Lower triangular iv) Upper triangular. (12 Marks)
- 3 a. Define stack and Abstract Data type of stack. (08 Marks)
 b. Explain Towers of Hanoi using stack with a program. (12 Marks)
- 4 a. What is queue? Explain in detail rail road car rearrangement application of queue. (16 Marks)
 b. Write a code for ISFull () and Last () for queue. (04 Marks)

PART – B

- 5 a. Define dictionary with its operation. (06 Marks)
 b. Explain insertion and deletion of elements in skiplist and give the code for any one operation. (14 Marks)
- 6 a. Explain any 3 properties of binary tree. (08 Marks)
 b. Construct a tree for the following :
 i) $((-a) + (x + y)) / ((+b) * (c * a))$
 ii) $((a + b) + c) + d$
 iii) $(a * b) + (c - d)$. (12 Marks)
- 7 a. Define priority queue. Write abstract data type priority queue. (10 Marks)
 b. Define heap. Explain min and max trees with example. (05 Marks)
 c. Define HBLT and WBLT. (05 Marks)
- 8 a. Explain the following :
 i) Binary search tree
 ii) M-way search tree
 iii) B tree of order m (12 Marks)
 b. Write a program for insertion operation of binary search tree. (08 Marks)

* * * * *