Roll No.

Total No. of Pages : 02

Total No. of Questions : 16

BCA (2014 to 2018) (Sem.-3) DATA STRUCTURES Subject Code : BSBC-302 M.Code : 10058

Time: 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

- 1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
- 2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

Answer briefly :

- 1. Define Big O notation.
- 2. What is meant by an array?
- 3. Name any two operations performed on stacks.
- 4. List two benefits of linked lists over array.
- 5. What is meant by record?
- 6. Name the complexity of binary search.
- 7. Define Polish notation.
- 8. What is Recursion?
- 9. What is meant by binary tree?
- 10. Comment on dynamic storage management.

(S3)-926

SECTION-B

- 11. a) What is meant by problem analysis? Explain.
 - b) Explain the term "Time Space Trade-off".
- 12. a) Discuss the steps for linear search algorithm.
 - b) Write an algorithm for insertion sort.
- 13. What is meant by stack data structure? Write a C program to demonstrate Push and Pop operations.
- 14. Explain the concept of recursion by taking some suitable examples.
- 15. a) Discuss the insertion and deletion for circular linked list.
 - b) What are priority queues? Explain.
- 16. a) Explain the inorder traversal of binary tree.
 - b) Discuss different applications of tree data structures.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.

(S3)-926