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April-2016



कडबा - 001

COMPUTER SCIENCE PAPER - I : CS-231
Data Structure - I
(23245)

P. Pages : 2

Time : Two Hours

Max. Marks : 40

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Graph or diagram should be drawn with the black ink pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. All questions are compulsory.
5. Figures to the right indicate full marks.

1. Attempt any eight.

8

- a) Define primitive data structure.
- b) Define term Data structure.
- c) What is mean by analysis of algorithm for time.
- d) Define order notation.
- e) Define term stack.
- f) What is peep operation on stack.
- g) Define term priority queue.
- h) What is mean by delete operation on queue.
- i) What is circular linked list.
- j) What is search operation in linked list.

2. Attempt any four. 8
- How to store and retrieve value from 2 dimensional array in algorithmic notations.
 - State any two advantages of algorithm analysis.
 - What do you mean by "stack overflow",
 - what do you mean by queue underflow",
 - What is doubly linked list?
 - Enlist file structures.
3. Attempt any two. 8
- Write algorithm to change i^{th} element from top of stack.
 - Write algorithm to delete element in queue.
 - Write algorithm to delete lost node of linear linked list.
4. a) Attempt any two. 6
- Discuss format conversion of algorithm.
 - Show computation of space analysis of algorithm matrix addition.
 - Discuss processing sequential file.
- b) Differentiate singly & doubly linked list. 2
5. Attempt any one. 8
- Consider an infix expression $A+B*(C+D) - E$ convert it in to postfix expression, show steps.
 - Write algorithm to add new node in sorted doubly linked list.
