DATA STRUCTURE & FILES
NOV - DEC 2009

Time : Three Hours Pages :- 02 **Max. Marks : 100**

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answersheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Student should note, no suppliment will be provided.
4. Answer **any two** questions from each unit.
5. Figures to the right indicate full marks.
6. Assume suitable data if necessary.
7. Algorithms may also be written in sparks /c Languags.

UNIT - I

1. Write an algorithm to generate fully parenthesized infix expressions from their postfix form. **10**

2. Design a data representation sequentially mapping ~ queues into an array V(1 m). Represent each queue as a circular queue within V. Show the representation diagrammatically and write conditions for QUEUE - FULL and QUEUE - EMPTY. **10**

3. Discuss use of stack by function call and recursive function call. **10**

UNIT - II

4. Let P be a pointer to the first node in a singly linked list and X an arbitrary node in this list. Write an algorithm to delete this node from the List. If X = P, then P should be reset to point to the new first node in the list. **10**

5. Design a storage management scheme for the case when all requests for memory are of the same size, say k. Write algorithms to free and allocate storage in this scheme. **10**

6. Explain suitable data structure of polynomials **10**

P.T.O.