



ELECTIVE - II
Compiler Construction
(New) (1283)

P. Pages : 2

Time : Three Hours

Max. Marks : 100

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answer sheet 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. Students should note, no supplement will be provided.
4. Attempt **any two** sub questions from each unit.
5. Figures to the right indicate full marks.
6. Assume suitable data wherever necessary.

UNIT - I

1. a) Define a compiler ? Explain the various phases of compiler with neat diagram ? **10**
- b) Explain various compiler - construction tools ? **10**
- c) Explain the role of lexical analyzer along with its various issues ? **10**

UNIT - II

2. a) Explain various error - recovery strategies of a Parser ? **10**
- b) Explain the concept of FIRST and FOLLOW with suitable examples for each ? **10**
- c) Explain the LR parsing technique with suitable example ? **10**

UNIT - III

3. a) Explain how will you construct DAG for expression ? Give suitable example ? **10**
- b) Explain in brief. **10**
 - i) Graphical Representation for expressions.
 - ii) Types of three - address statements.

- c) Explain syntax - directed translation of a switch case statement with suitable example ? 10

UNIT - IV

4. a) Explain various issues in design of a code Generator ?
Also explain role of code generator with neat sketch ? 10
- b) Write and explain Run - time storage management with neat sketch ? 10
- c) Explain peep - hole optimization technique in detail ? 10

UNIT - V

5. a) Explain various storage allocation strategies with suitable examples ? 10
- b) Write short notes on. 10
- i) Hash table.
- ii) Dynamic storage allocation.
- c) Write short notes on. 10
- i) Activation trees.
- ii) Control stack.
