

Code No.: ETCS 405
Paper: Compiler Construction

L T C
3 1 4

INSTRUCTIONS TO PAPER SETTERS:

MAXIMUM MARKS: 75

1. Question No. 1 should be compulsory and cover the entire syllabus. This question should have objective or short answer type questions. It should be of 25 marks.
2. Apart from question no. 1, rest of the paper shall consist of four units as per the syllabus. Every unit should have two questions. However, student may be asked to attempt only 1 question from each unit. Each question should be of 12.5 marks.

UNIT - I

Classification of grammars, Context free grammars, Deterministic finite state automata (DFA) Non-DFA.

[No. of Hrs.: 10]

UNIT - II

Scanners, Top down parsing, LL grammars, Bottom up parsing, Polish expression Operator Precedence grammar, LR grammars, Comparison of parsing methods, Error handling.

Symbol table handling techniques, Organization for non-block and block structured languages

[No. of Hrs.: 12]

UNIT - III

Run time storage administration, Static and dynamic allocation, Intermediate forms of source program, Polish N-tuple and syntax trees, Semantic analysis and code generation.

[No. of Hrs.: 12]

UNIT - IV

Code optimization, Folding, redundant sub-expression evaluation, Optimization within iterative loops.

[No. of Hrs.: 10]

TEXT BOOKS:

1. Tremblay, et. al., "The Theory and Practice of Compiler Writing", McGraw Hill, New York, 1985.
2. A. Holub, "Compiler Design in C", PHI, 2004
3. Aho, Ullman & Ravi Sethi, "Principles of Compiler Design", Pearson Education, 2002

REFERENCES BOOKS:

1. Andrew L. Appel, "Modern Compiler Implementation in C", Delhi, Foundation Books, 2000.
2. Dick Grune et. Al., "Modern Compiler Design", Wiley Dreamtech, 2000.