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BP—26—2016

FACULTY OF COMPUTER STUDIES
B.Sc. (S.E.) (Fourth Semester) EXAMINATION
OCTOBER/NOVEMBER, 2016
SOFTWARE ENGINEERING

Paper S4.4

(Compiler Designing)

(Friday, 25-11-2016)

Time : 2.00 p.m. to 5.00 p.m.

Time— Three Hours

Maximum Marks—80

N.B. :— (i) All questions are compulsory.

(ii) Assume suitable data, if necessary.

1. Attempt the following : 20
 - (a) Explain the role of lexical analyzer.
 - (b) Explain peephole optimization.
 - (c) Generate parse tree for $A*B/C$.
 - (d) Generate the intermediate code for :
$$A = (B + C) + D * E.$$
2.
 - (a) What is Regular Expression ? Explain with example. 8
 - (b) Explain shift-reduce parsing with example. 7

Or

 - (c) Explain concept of Basic blocks and Flow graphs. 8
 - (d) Explain L-attributed definition for syntax directed translation. 7
3.
 - (a) Explain structure of compiler. 8
 - (b) Explain operator precedence parsing. 7

Or

 - (c) Explain Issues in the design of a code generator. 8
 - (d) Explain concept of predictive parser. 7

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4. (a) Explain Top down parsing. 8
- (b) What is NFA ? Explain with example. 7
- Or*
- (c) Explain how to write grammars for context free environment. 8
- (d) Explain issues associated with source language. 7
5. Write short notes on (any *three*) : 15
- (a) Ambiguous grammar
- (b) Derivation and parse tree
- (c) Backpatching
- (d) Input buffering
- (e) LR parsers.

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