Reg. No. :

Question Paper Code: 36802

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2018

Sixth Semester

Information Technology

01UIT602 – COMPILER DESIGN

(Regulation 2013)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. List the error recovery actions in lexical analyzer.

2. Distinguish Compiler with interpreter.

3. Define handle pruning.

4. When is a grammar said to be LL(1)?

5. Define back patching.

6. Write the methods of representing a syntax tree?

7. List the issues in the design of code generation.

8. Define stack allocation.

9. What are the criteria used for code-improving transformations?

10. What is meant by cross compiler?

PART - B (5 x 16 = 80 Marks)

11. (a) Discuss in detail about the role of Lexical and syntax analyzer with the possible error recovery actions. (16)

Or

(b) Explain grouping of phases. (16)

12. (a) Given the following grammar *S->AS/b, A->SA/a*. Construct a SLR parsing table for the string *baab*. (16)

Or

(b) Solve the given regular expression (a|b)*abb(a|b)* into NFA and find minimized DFA. (16)

13. (a) Explain about the different type of three address statements. (16)

Or

(b) Explain the role of declaration statements in intermediate code generation. (16)

14. (a) Discuss run time storage management of a code generator. (16)

Or

(b) Describe in detail about basic blocks and flow graphs. (16)

15. (a) Why do we need code optimization? Explain the principal sources of optimization. (16)

Or

(b) (i) Describe the efficient data flow algorithms in detail. (8)

(ii) Explain different storage allocation strategies. (8)

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