

24488

**B.Tech. 7th Semester (CSE)**  
**Examination, December-2015**  
**COMPILER DESIGN**  
**Paper-CSE-405-F**

*Time allowed : 3 hours]*

*[Maximum marks : 100*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after the examination.

*Note : Attempt five questions. Question No. 1 is compulsory. Select one question from each section.*

1. (a) What is the difference between DFA and NFA ?
- (b) What are the different phases of compiler ?
- (c) What is the role of parser ?
- (d) What is shift reduce parsing ?
- (e) Define SLR.
- (f) What is intermediate code ?
- (g) What do you mean by DAG ?
- (h) What is semantic error ?

**Section-A**

2. (a) What is translator ? Why need translator ? Explain different type of translator.
- (b) Explain various compiler construction tools.

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- 6. (a) What is syntax directed translation scheme ? How they are used to make syntax tree ?
- (b) Explain address code, quadruples and triples.

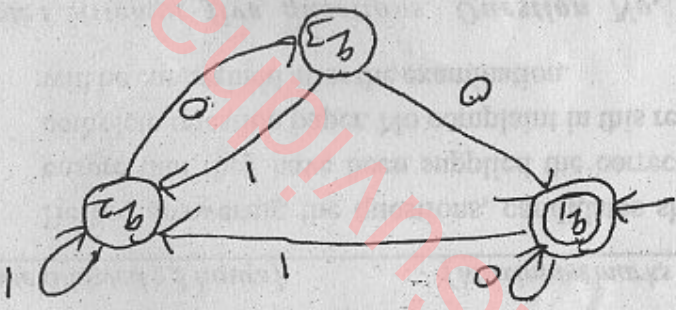
Section-C

$S \rightarrow AaAb/BbBa$   
 $A \rightarrow \epsilon$   
 $B \rightarrow \epsilon$

- 5. What is parsing ? Explain to p down parsing and predictive parsing techniques. Check the following grammar is LL(1) or not
- 4. What do you mean by grammar ? Explain Context Free Grammar ? Write a CFG which generate palindrome for binary number.

Section-B

- (b) What is the role of a lexical analyzer ? Explain how to design lexical analyzer.



- 3. (a) What is regular expression ? Find the regular expression correspondence to

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- 9. What is code optimization ? Describe local optimization and loop optimization.
- 8. What do you mean by symbol table ? What is the use of symbol table ? Explain the various data structure associated with symbol.

Section-D

- 7. (a) Define LALR ? Write a algorithm for construction of an LALR parsing table.
- (b) What is LR parsing ? Explain with example.

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