DHARMSINH DESAI UNIVERSITY, NADIAD
FACULTY OF TECHNOLOGY
B.TECH. SEMESTER VI [IT]
SUBJECT: (IT608) LANGAUGE TRANSLATOR

Examination	**:Block Exam(Regular)**	**Seat No.**	**: _____**
Date	**: 03 / 04 /2014**	**Day**	**: Thursday**
Time	**: ____ to _____**	**Max. Marks**	**: 36**

INSTRUCTIONS:
1. Figures to the right indicate maximum marks for that question.
2. The symbols used carry their usual meanings.
3. Assume suitable data, if required & mention them clearly.
4. Draw neat sketches wherever necessary.

Q.1 Do as directed.

(a) Give syntax tree/DAG (directed acyclic graph) for following statement. **[2]**
x=(b+c) /(b/-c) * (b+c)

(b) Lexical Analyzer and Parser should be kept as distinct phases and they should act as producer-consumer. Justify the statement. **[2]**

(c) In _____type of storage allocation, nested procedures not possible , but ____ type of storage it is possible.[static/stack/queue] **[2]**

(d) Discuss advantages and drawbacks of having separate lexical and syntactic phases in compilation process. **[2]**

(e) What is a "handle "in bottom up parsing? Explain with example. **[2]**

(f) Bottom up parser is doing rightmost derivations in reverse. **[2]**

Q.2 Attempt the following questions.

(a) Draw Parse table for following grammar **[6]**
S->1A0 A->1B1 | 1S1| 0B0 B->2|3
Use the parse table to parse the input string " 11210"

(b) Write SDD(syntax directed definition) to generate "syntax tree" form of intermediate code for following simple calculator language : **[6]**
S->id=E E->E+T E -> E+T E-> T T->(E) T->id T->number

Q.3 (a) Is the following grammar SLR? Justify. **[6]**
S->Sa | Sb | c
Use the table *(if possible to generate)* and parse "caca".

(b) Write short note on-"block structured symbol table organization techniques" **[6]**