Roll No. .....

67058

M.C.A. 2nd Semester CBCS Scheme (w.e.f. 2016-17)

Examination–May, 2017

Compiler Design

Paper-MCA-203(HC)

Time : 3 hours ***Max. Marks : 80***

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 in all. Question no. 1 is **compulsory**. In addition to compulsory question, attempt **four** more questions selecting **one** question from each unit. All questions carry equal marks.

1. Compulsory Question:

(a) What are the functions performed by macro preprocessor ?

(b) What is overlay ? Discuss linking of overlay structured program.

6. (a) Explain qu ples and triples with example. W three address code for the express a+a*(b–c)+(l

(b) Explain v s run time storage allocation s gies.

7. (a) Explain var data structure used for implementi symbol table and compare th

(b) Give the neral structures of activation r . Explain the purpose of each con nt.

8. (a) Explain th ain issues of code generation ail.

(b) Define Pee optimization. List the characterist Peephole optimization.

9. (a) Explain D/ presentation of basic blocks with ample.

(b) Explain v s code optimization techniques. uss the strategies for loop optir on and dead code elimination

(c) What he two types of conflicts in shift r e parsing ? Give an example.

(d) Discu Chomsky classification of gramr

(e) Defin various types of syntax direct nslation.

(f) What symbol table ? Discuss the typica ies in it.

(g) What ne issues in design of a code gener

(h) Discu arious targets for code optim n.

UNIT-I

2. (a) Expla problems faced by a one-pass bler. Draw and explain the detail wchart for pass-2 of a two-pass a bler.

(b) What lifferent loading schemes ? Expla solute loader scheme with its ad ges and disadvantages.

3. (a) What the basic functions of loade ifferentiate linking, relative and b ap loader.

(b) State the basic tasks a macro instruction processor performs. Explain how the nested macro calls are executed with an example.

UNIT-II

4. (a) How input buffering helps lexical analyzer in compilation process ? Discuss with an example.

(b) What is recursive descent parser ? Construct recursive descent parser for the following:

E!E+T|T

T!TF|F

F!F_|a|b

5. (a) Generate SLR parsing table for following grammar:

S→Aa|bAc|Bc|bBa

A→d

B→d

And parse the sentence "bdc" and "dd".

(b) How can errors be recovered in lexical phase of a compiler ? Explain.