

ALCCS – OLD SCHEME

Time: 3 Hours

FEBRUARY 2013

Max. Marks: 100

PLEASE WRITE YOUR ROLL NO. AT THE SPACE PROVIDED ON EACH PAGE IMMEDIATELY AFTER RECEIVING THE QUESTION PAPER.

NOTE:

- Question 1 is compulsory and carries 28 marks. Answer any FOUR questions from the rest. Marks are indicated against each question.
- Parts of a question should be answered at the same place.

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- Q.1**
- a. Discuss in brief the widely used language processor development tool – the lexical analyzer generator LEX.
 - b. Discuss ‘Rehashing’ technique for collision handling in hash table.
 - c. Explain the following advanced assembler directives:-
ORIGIN
EQU
 - d. Explain the following directives of assembler:-
PROC
ENDP
NEAR
FAR
 - e. Discuss in brief the problem of single pass assembler.
 - f. Discuss the design of Macro preprocessor in brief.
 - g. Discuss feature to implement Top Down parsing. (7×4)
- Q.2**
- a. What is system software? Explain ‘User’ and ‘System’ centric views of system software. (9)
 - b. Explain the following terms:
 - (i) Translator
 - (ii) Loader
 - (iii) Interpreter (9)
- Q.3**
- a. Differentiate two-pass and single pass translation scheme in assembler. (9)

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- b. Discuss alternative ways of processing declarative statements and assembler directives and their comparative benefits. (9)
- Q.4** a. Advanced macro facilities are aimed at supporting semantic expansion. Explain “expansion time variable” and “facilities for altering flow of control during expansion” in this context. (9)
- b. Explain concept of nested macro calls. (9)
- Q.5** a. What is ‘binding time’ in compilation? Discuss importance of binding time. (9)
- b. Discuss dynamic memory allocation and access in compilation process. (9)
- Q.6** a. Explain the basic function of a simple one-pass compiler. (9)
- b. Discuss the concept of ‘self-relocation’ program. (9)
- Q.7** a. Explain ‘pure’ and ‘impure’ interpreter. (9)
- b. Discuss the processing of an object program using linking loader and linkage editor. (9)