LAST MOMENT TUITIONS

System Programming And Compiler Construction
May 18

Total marks: 80
Total time: 3 Hours

INSTRUCTIONS
(1) Question 1 is compulsory.
(2) Attempt any three from the remaining questions.
(3) Draw neat diagrams wherever necessary.

Q.1 Attempt all 4.
(a) Differentiate between system software & application software? (5 marks)
(b) Explain the role of finite automata in compiler theory. (5 marks)
(c) Explain the various functions of a loader. (5 marks)
(d) Compare compilers and interpreters. (5 marks)

Q.2
(a) With reference to assembler, explain the following tables with suitable example. (10 marks)
(i) POT (ii) MOT (iii) ST (iv) LT
(b) Explain the different code optimization techniques in compiler design. (10 marks)

Q.3
(a) Explain the working of two pass macro processor with neat flowcharts and databases, (Clearly show entries in databases.) (10 marks)
(b) Explain different types of code optimization techniques in compiler design. (10 marks)
Explain with example.

Q.4
(a) Construct a predictive parsing table for the grammar : - (10 marks)
E →→ TE'
E' →→ TE' / E
T →→ FT'
T' →→ *FT'
F →→ (E) / id
(b) Explain the different error recovery techniques. (10 marks)

Q.5
(a) Explain the different storage allocation strategies in detail. (10 marks)
(b) Differentiate Top-down and Bottom-up parsing techniques. (10 marks)
Explain shift reduce parser in detail.

Q.6

(a) Explain the different phases of compiler. Illustrate all these phases for the following statement: a = b +c*5 (10 marks)

(b) Write short note on: (10 marks)

(i) Parameterized Macros

(ii)YACC