MAY 2018 / 14.05.2018

Q.P.Code:11587

(3 Hours) **Total Marks: 80**

N.B.: (1) Question No. 1 is compulsory.
(2) Attempt any three questions out of remaining five questions.

Q1. (a) Differentiate between system software & application software? [05]
(b) Explain the role of finite automata in compiler theory. [05]
(c) Explain the various functions of a loader. [05]
(d) Compare compilers and interpreters. [05]

Q2. (a) With reference to assembler, explain the following tables with suitable example.
(i) POT (ii) MOT (iii) ST (iv) LT [10]
(b) Explain the different code optimization techniques in compiler design. [10]

Q3. (a) Explain the different issues in code genetrations. [10]
(b) Explain working of direct linking loader with example, showing entries in different databases built by DLL. [10]

Q4. (a) Construct a predictive parsing table for the grammar : - [10]

$E \rightarrow TE'$
$E' \rightarrow +TE' / E$
$T \rightarrow FT'$
$T' \rightarrow *FT' / \epsilon$
$F \rightarrow (E) / id$

(b) Explain the different error recovery techniques [10]

Q5. (a) Explain the different storage allocation strategies in detail. [10]
(b) Differentiate Top-down and Bottom-up parsing techniques. Explain shift reduce parser in detail. [10]

Q6. (a) Explain the different phases of compiler. Illustrate all these phases for the following statement:
a = b + c * 5 [10]
(b) Write short note on: [10]
(i) Parameterized Macros
(ii) YACC

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