Reg. No. | | | | | | | | | | | | |

Question Paper Code : 51387

B.E./B. Tech. DEGREE EXAMINATION, MAY/JUNE 2016

Fifth Semester

Computer Science and Engineering

CS 2304/CS 54/CS 1304 A/10144 CS 505 – SYSTEM SOFTWARE

(Common to Information Technology)

(Regulations 2008/2010)

(Common to PTCS 2304/10144 CS 505 – System Software for B.E. (Part-Time) Fourth Semester CSE – Regulations 2009/2010)

Time : Three Hours **Maximum : 100 Marks**

Answer ALL questions.

PART – A (10 × 2 = 20 Marks)

1. Distinguish between system software and application software.
2. What is base relative addressing ? When do you use it ?
3. Give the significance of using EQU and ORG assembler directive ?
4. What is the use of literals ?
5. What is a bootstrap loader ?
6. State the use of an automatic library search.
7. Compare macros with subroutines.
8. State the purpose of macro-time variable.
9. Why is the user interface important ?
10. List the commands used in the editing process.

PART – B (5 × 16 = 80 Marks)

11. (a) Explain the SIC/XE machine architecture.

OR

(b) Compare SIC machine architecture versus SIC/XE machine architecture.

12. (a) Explain the data structures and algorithms of a two pass assembler.

OR

(b) Describe the actions taken by an assembler to deal with the program relocation.

13. (a) Illustrate the data structures and algorithms for a linking loader.

OR

(b) (i) How can you load and call subroutines using dynamic linking ? (8)

(ii) Explain the machine independent loader features. (8)

14. (a) Design an algorithm for a two pass macro processor in which all macro definitions are processed in first pass, all macro invocations are expanded in second pass. The macro definitions or invocations need not be allowed within macros.

OR

(b) (i) Explain the macro processor that deals with recursively defined macros. (8)

(ii) Explain the usage of conditional macros. (8)

15. (a) Illustrate the structure of an editor with neat diagram.

OR

(b) Discuss how the interactive debugging systems provide testing and debugging to the programmers.

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