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**Question Paper Code : 71387**

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2015.

Fifth Semester

Computer Science and Engineering

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

(Common to Information Technology)

(Regulation 2008/2010)

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

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is system software? Give examples.
2. What are the additional registers provided in SIC/XE than SIC?
3. State the importance of assembler directives.
4. Compare absolute expression and relative expression.
5. Give the basic loader functions.
6. What are the advantages of MS DOS linker?
7. Differentiate between a macro and a subroutine.
8. How to design the pass structure of a macro assembler?
9. What are the phases in performing editing process?
10. Define user interface.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the SIC programming with necessary examples. (8)  
(ii) Explain the data movement and arithmetic operations for SIC. (8)

Or



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- (b) Describe the instruction format and addressing modes of the SIC/XE system in detail. Also explain the various arithmetic operations available in SIC/XE system with examples. (16)
12. (a) (i) Explain how the program blocks are assembled. (8)  
(ii) Discuss the functions of two pass assemblers. (8)
- Or
- (b) Explain the features of machine-independent assembler. (16)
13. (a) Explain the different machine independent loader features in detail. (16)
- Or
- (b) (i) Describe the working of linkage editors with a neat flow diagram. (8)  
(ii) Explain about the dynamic linking. (8)
14. (a) (i) State and explain the algorithm for one pass macro processor. (8)  
(ii) List the data structures used by a macro preprocessor and explain. (8)
- Or
- (b) Explain the following  
(i) Macro expansion (8)  
(ii) MASM Macro processor. (8)
15. (a) (i) Write shortly about user interface criteria. (6)  
(ii) Explain with a neat diagram, the structure of an editor. (10)
- Or
- (b) (i) Write a note on text editors. (6)  
(ii) Discuss about the interactive debugging systems. (10)

