

## MCA DEGREE III SEMESTER EXAMINATION NOVEMBER 2013

CAS 2301/2303 SYSTEM SOFTWARE  
(Supplementary)

Time : 3 Hours

Maximum Marks : 50

**PART A**  
(Answer ALL questions)

(15 x 2 = 30)

- I. (a) Explain forward reference.  
(b) What are the different types of records in an object oriented program?  
(c) Explain symbol – defining statements.
- II. (a) Explain absolute loader.  
(b) What is dynamic linking?  
(c) What is a linkage editor?
- III. (a) What is the difference between macro and subroutine?  
(b) Explain concatenation of macro parameters.  
(c) Explain recursive macro expansion
- IV. (a) Explain lexical analysis.  
(b) What is recursive – descent parsing?  
(c) What are structured variables?
- V. (a) Explain object oriented operating system.  
(b) Describe distributed operating system.  
(c) What are the types of multiprocessor operating system?

**PART B**

(5 x 4 = 20)

- VI. A. Explain 2 pass assembler algorithms and describing the data structures used.  
**OR**  
B. Explain 'control sections'. How are they handled by the assemblers?
- VII. A. Explain the algorithm and data structures for a linking loader.  
**OR**  
B. Explain the term 'bootstrap loader'. Write a SIC/XE program for a bootstrap loader.
- VIII. A. Explain macro processor algorithm and data structures.  
**OR**  
B. Explain machine – independent macro processor features.
- IX. A. Explain machine-dependent compiler features.  
**OR**  
B. Explain machine-independent compiler features.
- X. A. Explain interrupt processing and process scheduling.  
**OR**  
B. Explain the real and virtual memory management in detail.

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