A

MCA DEGREE II SEMESTER EXAMINATION MAY 2014

CAS 2203 SYSTEM SOFTWARE
(Regular & Supplementary)

Time: 3 Hours   Maximum Marks : 50

PART A
(Answer *ALL* questions)

(15 x 2 = 30)

I.   (a)   What is an assembler? Mention its functions.
     (b)   Explain symbol defining statements.
     (c)   Write notes on expressions.

II. (a)   Explain relocation.
     (b)   What do you mean by linkage editors? Explain.
     (c)   Explain bootstrap loader.

III. (a)   What is a Macro? Differentiate between macro and subroutine.
     (b)   Explain conditional macro expansion with example.
     (c)   Explain macro preprocessors.

IV. (a)   Write notes on grammars.
     (b)   What do you mean by lexical analysis? Explain.
     (c)   Explain code generation.

V.   (a)   What are the basic functions of an operating system?
     (b)   Write notes on virtual machines.
     (c)   Explain the types of multiprocessor operating systems.

PART B

(5 x 4 = 20)

VI.   Explain 'Control Sections'. How are they handled by the assemblers?
                                          OR
VII.   Explain the design of single pass assembler.

VIII   Explain how program linking is done.
                                          OR
IX.   Explain dynamic linking with suitable example and diagram.

X.   Explain macro processor algorithm and data structures.
                                          OR
XI.   Explain the design of a MACRO processor with suitable example.

XII.   Differentiate between machine dependent code optimization and machine independent code optimization.
                                          OR
XIII. Discuss the various compiler design options.

XIV.   Compare and contrast distributed and network operating system.
                                          OR
XV.   Explain machine dependent operating system features in detail.

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