B.Tech Degree V Semester (Supplementary)Examination June 2011

IT/CS 502 SYSTEM PROGRAMMING

(2006 Scheme)

Time : 3 Hours Maximum Marks : 100

PART A

(Answer **all** questions) (8x5=40)

I. a) What are the different types of records in an object program? Explain with example.

b) Explain program relocation with example.

c) Explain the algorithm of an absolute loader.

d) What is dynamic linking?

e) Differentiate between macro and subroutine with example.

f) Explain macro preprocessors.

g) Explain distributed operating system.

h) Explain object oriented operating system.

PART B

(4x15=60)

II. Explain 2 pass assembler algorithm describing the data structure used. (15)

OR

III. a) Explain 'control sections'. How are they handled by the assemblers? (7)

b) Explain the role of following assembler directives in an assembly language program. (8)

IV. Explain the algorithm for a linking loader describing the data structure used. (15)
i) BASE ii) USE

OR

V. a) Explain the term 'bootstrap loader'. Write a SIC/XE program for a bootstrap loader. (10)

b) Explain the advantages of dynamic binding with the help of example. (5)

VI. Explain the macro processor algorithm. (15)

OR

VII. a) Define 'macro'. Explain its usage in assembly language program. (8)

b) Explain recursive macro expansion. (7)

VIII. Compare and contrast Distributed and Network Operating System. (15)

OR

IX. Explain 'hierarchical structure' with respect to OS design. What do you mean by 'virtual machine' approach in OS design? (15)

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