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Reg. No. : .....

Name : .....

Fifth Semester B.Tech. Degree Examination, November 2013
(2008 Scheme)
08.504 : SYSTEMS PROGRAMMING (RF)

Time : 3 Hours Max. Marks : 100

COX MEMORIAL CSI INSTITUTE OF TECHNOLOGY
TRIVANDRUM-11
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PART – A

Answer **all** questions. **Each** carries **4** marks.

1. Enumerate the characteristics of RISC and CISC machines.
2. Give the features of CRAY T3E machine (organisation, memory and registers only).
3. Explain the 3 byte and 4 byte instructions of SIC/XE machine.
4. How system programming is dependent on its hardware ?
5. What is a forward reference ? How it is handled in a one pass assembler ?
6. What is program relocation ?
7. How external references are taken into account by MASM ?
8. Give the difference between macros and subroutines.
9. Enumerate the capabilities of debugger.
10. Give an overview of editing process. **(10×4=40 Marks)**

P.T.O.

PART – B

Answer **any one full** question from **each** Module.

11. a) Explain VAX architecture. **10**

    b) What are the machine independent features of SIC/XE assembler ? **10**

OR

12. a) Illustrate control sections and program blocks of SIC/XE assembler. **10**

    b) Write a SIC/XE programme to concatenate two strings. **10**

13. a) What are the machine dependent loader features ? Explain. **5**

    b) Write the algorithm for pass 2 of a linking loader. **8**

    c) Explain the MS DOS linker. **7**

OR

14. a) Explain linkage editors, Dynamic linking and Bootstrap loaders. **12**

    b) Give the algorithm for Pass 1 of a linking loader. **8**

15. a) What are macro calls within a macro ? **5**

    b) Explain the machine independent features of macro. **8**

    c) Give the algorithm for a macroprocessor explaining the various data structures used. **7**

OR

16. a) What are the functions to be performed by a text editor ? **5**

    b) Give the structure of a text editor. **10**

    c) What are the functions and capabilities required for debuggers ? **5**