6481

Reg. No. : ....

Name : ....

Fifth Semester B.Tech. Degree Examination, November 2014
(2008 Scheme)
08.504 : SYSTEMS PROGRAMMING (RF)

Time : 3 Hours

Max. Marks : 100

PART – A

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

1. Explain the differences between RISC and CISC machines.

2. What are the differences between system software and application software ?

3. Explain different floating point representation used in ultra SPARC machine.

4. How expressions can be defined in assembly language program ? Explain the difference between absolute expression and relative expression.

5. Write down the algorithm for absolute loader.

6. Explain about the pc relative and base relative addressing mode. Explain about different assembler directives required to specify base relative addressing mode.

7. What is the difference between following sequences of statements :

   a) LDA #3

   b) THREE EQU 3

      LDA # THREE

   c) THREE EQU 3

      LDA THREE.

8. Explain the difference between macros and subroutine.

9. Explain the term loading, linking and relocation.

10. Specify the tasks performed by a document editing process. **(10×4=40 Marks)**

PART – B

Module – I

11. a) Explain the architecture of Pentium Pro.   10

    b) Write SIC/XE program to find number of odd numbers in a set of integers stored in the memory.   10

OR

12. a) Explain the architecture of Power PC.   10

    b) Write SIC/XE program to add a set of numbers.   10

Module – II

13. a) Explain about different machine independent assembler features.   10

    b) Explain the design of a one pass assembler with suitable example.   10

OR

14. a) Explain the pass 1 and pass 2 algorithms of a two pass linking loader.   15

    b) What is meant by dynamic linking ? How is dynamic linking performed ?   5

Module – III

15. a) Explain about machine independent marco processor features.   10

    b) With a neat diagram explain the design of an editor structure.   10

OR

16. Explain different phases of a compiler.   20