

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted during the academic year 2009 – 10 & thereafter)
SUBJECT CODE: CS/PC/CA14
M.Sc. DEGREE EXAMINATION, NOVEMBER 2010
INFORMATION TECHNOLOGY
FIRST SEMESTER

COURSE : CORE
PAPER : COMPUTER ARCHITECTURE
TIME : 3 HOURS **MAX. MARKS: 100**

SECTION – A

(10X2=20)

ANSWER ALL THE QUESTIONS:

1. Mention the different phases of the Instruction Cycle.
2. What is a pseudoinstruction? Mention any 4 pseudoinstructions.
3. State the function of a BCD Adder.
4. What is divide stop?
5. Define Pipelining.
6. What is Reverse Polish notation? Give an example.
7. Differentiate tightly coupled and loosely coupled multiprocessor systems.
8. What is parallel processing?
9. Define Cycle Stealing.
10. Mention the microoperations that are performed during an interrupt cycle.

SECTION – B

(6X5=30)

ANSWER ANY SIX QUESTIONS:

11. Explain the first pass of an assembler with a flow chart.
12. Describe about the common bus system.
13. Discuss about the addition and subtraction with signed 2's complement data.
14. Explain in brief about the instruction formats.
15. Discuss about address mapping using pages.
16. Describe SIMD Array processor with a neat diagram.
17. Differentiate asynchronous and synchronous transmission.
18. Discuss about an I/O Interface Unit with an example.

SECTION – C

(5X10=50)

ANSWER ANY FIVE QUESTIONS:

19. Explain about the various addressing modes.
20. Explain in brief Booth Multiplication Algorithm with a neat diagram.
21. Discuss in brief about the RISC pipeline.
22. Elaborate Cache Memory with focus on Direct Mapping.
23. Discuss about Time shared common bus and crossbar switch interconnection structures.
24. Discuss in detail about DMA.
25. What are priority interrupts? Explain.
