 LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

 **M.Sc.** DEGREE EXAMINATION - **COMPUTER SC.**

FIRST SEMESTER – APRIL 2011

# CS 1814 - ADVANCED COMPUTER ARCHITECTURE

 Date : 20-04-2011 Dept. No. Max. : 100 Marks

 Time : 1:00 - 4:00

 **SECTION - A**

**ANSWER ALL THE QUESTIONS: (5X2=20)**

1. Define accumulator.

2. What are universal gates?

3. Define instruction cycle.

4. Write any four data transfer instructions.

5. What is dynamic ram?

6. Write down the memory hierarchy.

7. What are maskable interrupts?

8. Define synchronization.

9. Write any two advantages of using vector processors.

10. What is systolic array processor?

**SECTION-B**

**ANSWER ALL THE QUESTIONS**: **(5X8=40)**

11. a) Write down the importance of Assembly level language

 (OR)

 b) How will you evaluate the performance of a computer?

12. a) Write down the differences between RISC and CISC

 (OR)

 b) Explain Instruction pipeline

13. a) Explain Memory modules

 (OR)

 b) Explain Cache memories

14. a) Explain programmed I/O

 (OR)

 b) Explain I/O Subsystem and its functionalities.

15. a) Explain Vector Super Computers

 (OR)

 b) Explain the functionality of SIMD array processors.

**SECTION-C**

**ANSWER ANY TWO QUESTIONS: (2X20=40)**

16. a) Explain the generations of computers

 b) Explain Super scalar architectures.

17. a) Explain virtual memories and its mapping schemes.

 b) Compare the Control flow computers with data flow computers

18. a) Explain systolic array architectures

 b) Explain sum of products in digital logic

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