 LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

FIRST SEMESTER – **APRIL 2012**

# CS 1814 - ADVANCED COMPUTER ARCHITECTURE

Date : 03-05-2012 Dept. No. Max. : 100 Marks

Time : 9:00 - 12:00

**PART-A**

**Answer All the Questions: 10X2=20**

1. How to declare RTN register.
2. Give an example for ALU instruction.
3. Mention an example for each type of interrupts.
4. What is super pipeline?
5. Define cache memory.
6. Write the draw backs of programmed I/O.
7. What is breakpoints?
8. List out the types of I/O techniques.
9. Define an array processor.
10. What is an operation manager?

**PART- B**

**Answer All the Questions: 8X5=40**

11 a) Write the characteristic of SRC.

OR

b) Compare the characteristic of CISC and RISC.

12 a) Write 4-address and 0-address instruction format and draw the required machine.

OR

b) Explain status bit register with example.

13 a) What is replacement algorithm? Explain its type.

OR

b) Discuss the performance issue in memory.

14 a) What is DMA? Explain its working with neat diagram.

OR

b) Write all the steps for interrupt processing in I/O system.

15 a) Explain data flow architecture with neat diagram.

OR

b) Draw and explain SIMD configurations of array processors.

**PART-C**

**Answer any TWO: 2X20=40**

16 a) Discuss common addressing modes

b) Explain the hazards of pipeline processing.

17 a) Explain the super scalar architecture with neat diagram.

b) Compare the concepts in cache memory and main memory.

18 a) Discuss network design decisions for Inter- PE communications.

b) Explain the type of vector instruction.

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