Roll No……

Printed Pages: 2

1696

BCAR/M-15

COMPUTER ARCHITECTURE-II

Paper-BCA-(243)

Time allowed: 3 hours] **[Maximum marks: 80**

Note: Attempt five questions in all including question bo.1 and selecting one question from each section. All question carry equal marks.

Compulsory Question

1. Answer the following questions in brief:
   (a) Distinguish between Internal and External interrupts.
   (b) What is NAN in IEEE 754 floating point standard?
   (c) What do you mean by completeness of instruction set architecture?
   (d) What is multifunctional pipeline?
   (e) Define Setup time and Drain out time of pipeline.
   (f) What is MISD architecture?
   (g) Define diameter and bisection bandwidth of an interconnection network.
   (h) What is SMP MIMD architecture?

UNIT-I

2. What is non-restoring division algorithm? Discuss its hardware implementation.
3. (a) What is Normalized floating point number? Explain how 32 bit floating point numbers are represented in IEEE754 standard.
   (b) Discuss the multiplication algorithm of floating point numbers.

UNIT-II

4. (a) Explain vectored interrupt, Non-vectored interrupt, Interrupt Vector, Level of interrupt and Priority of interrupt.
   (b) Discuss the two methods to access interrupt handler in CPU.
5. What is RISC? Discuss the distinguishing features of RISC as compared to CISC. Give three examples of RISC Based processors from real world.

UNIT-III

6. Write short notes on the following:
   (a)Instruction look ahead system
   (b) Optimization of a pipeline.
7. (a) What is speedup factor of a pipeline? How do you calculate it?
   (b) Discuss the organization of a pipeline in general purpose computer.

UNIT-IV

8. (a) Discuss how parallelism is achieved in uniprocessor system?
   (b) Compare tree, mesh and hypercube topologies.
9. (a) Explain the working of 8x8 omega network.
   (b)What is Dataflow computer? Discuss static architecture of a data flow computer.