COMPUTER ARCHITECTURE-II

Time Allowed : 3 Hours *Maximum Marks : 80*

Note : Attempt five questions in all, selecting ***one*** question from each unit in addition to compulsory **Question No. 1**. All questions carry equal marks.

Compulsory Question

1. Define the following :
   (a) CISC
   (b) MIND
   (c) Polling
   (d) Omega Network
   (e) Pipelining
   (f) ISR
   (g) Cross Bar Switching
   (h) Reservation table.

UNIT-I

2. (a) What do you mean by Floating Point No. ? Explain the concept of normalised floating point no.
   (b) Perform the multiplication of 0111 and 0011 using Booth algo. 2×8

3. (a) Describe the algo for floating point no. division

(b) Perform :

(i) 11.25 ÷ 23.75

(ii) 11.25 – 23.75 using normalised floating pt. no. 2×8

UNIT-II

4. (a) Explain level and priorities of interrupts.

(b) Differentiate between RISC and CISC. 2×8

5. (a) Implement Interrupt inside the CPU. Explain.

(b) Explain characteristics of RISC. 2×8

UNIT-III

6. (a) Explain organisation of Pipeline in General Purpose Computer.

(b) Explain advantage of Look ahead system. 2×8

7. (a) Explain Pipeline execution of instruction.

(b) Explain the concept of Pipeline with minimum idling. 2×8

UNIT-IV

8. (a) Write short note on the following :

(i) NUMA

(ii) COMA

(b) Discuss difference b/w tightly coupled and loosely coupled multi processor. 2×8

9. (a) Explain various algo used to allocate buses to any unit.

(b) Explain Flynn's classification. 2×8