J-2/2116

COMPUTER SYSTEM ORGANIZATION AND ARCHITECTURE—213

Semester—III

Time Allowed: Three Hours]  

[Maximum Marks: 75

Note:— Attempt *five* questions in all by selecting at least *two* questions each from the Sections A and B. Section C is compulsory. All questions carry equal marks.

**SECTION—A**

1. Discuss in detail the organization of a basic computer.

2. Explain the various characteristics of RISC architecture.

3. Explain the various addressing modes available for executing instructions.

4. What do you mean by memory organization? Discuss in detail about cache memory.

**SECTION—B**

5. What is the difference between a microprocessor and a microprogram? Explain the difference between hardwired control and microprogrammed control. Is it possible to have a hardwired control associated with a control memory?

6. What is the purpose of I/O interface in computer system? Define and distinguish between Isolated and Memory Mapped Input-Output.
7. What are the various data transfer schemes? Briefly discuss each scheme.

8. Discuss the following in reference to asynchronous data transfer:
   (i) Strobe control
   (ii) Handshaking.

SECTION—C

9. Write short notes on the following:
   (a) Instruction cycle
   (b) SCSI disk
   (c) Program interrupts
   (d) Shift micro-operations
   (e) Control memory.