COMPUTER SYSTEM ARCHITECTURE

Time: Three Hours]   [Maximum Marks:100

SECTION-A

1. (a) Define Computer Architecture. How is it different from Computer Organization ?   8
   (b) Explain Direct, Indirect, Implied and Immediate Addressing modes.   12
2. What is Machine Instruction ? List the common fields that are present in the format of instruction. Explain different types of instruction formats giving examples.   20
3. (a) Differentiate characteristics of RISC and CISC.   10
   (b) What do you mean by in Interrupt ? Explain various types of interrupts.   10

SECTION-B

4. Write short notes on the following :
   (a) Register transfer language.   10
   (b) Airthmetic micro-operations.   10
5. Explain Microprogram control organization.   20

SECTION-C

6. (a) What do you mean by Memory Hierchy ? Explain in brief.   10
   (b) Discuss the role of Interleave Memory in reducing the speed gap between processor and main memory.   10
7. Explain Associate Memory in detail giving structure of it. Discuss Read and Write operations of Associate memory.   20
8. What is Virtual Memory ? Explain 'Address mapping using Pags' and 'Page Replacement Policies'.   20

SECTION-D

9. What do you mean by DMA interface ? State its components. Explain how DMA is useful in information transfer between CPU and I/O devices.   20

10. Write notes on the following :
    (a) Input-Output processor.   10
    (b) Strobe control and Handshaking.   10

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