

GSE/D-24

1064

COMPUTER ARCHITECTURE

BCA-233

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. (a) Define Instruction Code.
- (b) What is a Micro Instruction ?
- (c) What is Asynchronous Serial Data Transmission ?
- (d) Define Priority Interrupt.
- (e) Differentiate between RISC and CISC.
- (f) What do you mean by Direct and Indirect Addresses ?
- (g) What is High Impedance State ?
- (h) Define Cache Memory. 2×8=16

Unit I

2. What is a Computer Instruction ? What are the various types of Computer Instruction ? Explain with the help of example. 16

P.T.O.

3. (a) Explain, why Computer Registers are used ? Briefly explain each computer register and its use. 8
- (b) Explain complete Instruction Cycle with flowchart. 8

Unit II

4. What is Address Sequencing ? Explain Micro Program Sequencer in detail. 10
5. (a) Evaluate the arithmetic statement $X = (A + B) * (C + D)$ using a general register computer with three address, two address and one address instruction format. 8
- (b) What do you mean by Bus and Memory Transfer ? Explain with suitable example. 8

Unit III

6. (a) Explain Program Control Instructions with example. 8
- (b) What is an Interrupts ? Explain various types of Interrupts. 8
7. What are Addressing Modes ? Explain various types of Addressing Modes in detail. 16

Unit IV

8. (a) Explain Memory Hierarchy and its importance. 8
(b) Explain Direct Mapping and Set Associative Mapping procedure of Cache Memory. 8
9. What is DMA ? Explain DMA Controller and DMA Transfer in detail. 16

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