(Com to CSE, IT, ECC)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (Part-A and Part-B)

- 2. Answer ALL the question in Part-A
- 3. Answer any **FOUR** Questions from **Part-B**

PART -A

- 1. a) Define system software.
 - b) Mention different types of Bus structures.
 - c) Write about microprogramming.
 - d) What is an interrupt cycle?
 - e) What are optical disks?
 - f) Define hardwired control?

PART -B

- 2. a) Explain the structure of a computer system.
 - b) Write about logical structure of a simple personal computer.
- 3. a) Illustrate with examples logic instruction and shift instructions.
 - b) What are different addressing modes? Explain.
- 4. a) Explain the 4 bit binary adder with a diagram.
 - b) Differentiate between ROM and PROM.
- 5. a) What is meant by micro-program sequencing? Mention its importance.
 - b) Write the advantages and usage of universal serial bus(USB).
- 6. a) Write about basic memory circuits.
 - b) Write about enabling and disabling interrupts.
- 7. a) What are magnetic hard disks? Mention the purpose of its usage.
 - b) What is meant by interleaving? Explain.

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PART -A

- 1. a) What is microprocessor, how it is different from micro computer?
 - b) Write about I/O controller.
 - c) What is a register transfer language?
 - d) What is cache memory?
 - e) What is Direct Memory Access?
 - f) What are different shift micro-operations?

PART -B

- 2. a) Explain the organization of a computer system and its input-output processor.
 - b) Illustrate with examples rotate instruction?
- 3. a) What are different addressing modes? Explain.
 - b) Write about real time computers.
- 4. a) What is instruction cycle? Explain with flowchart.
 - b) Write the advantages and usage of peripheral component Interconnect Bus?
- 5. a) What is flash memory, how it is different from cache memory?
 - b) Mention the standard I/O interfaces and describe the each one.
- 6. a) Differentiate between virtual memory and main memory.
 - b) What is micro programmed control?
- 7. a) Differentiate between EPROM and EEPROM.
 - b) Write the basic instruction types.

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PART -A

- 1. a) What is instruction cycle?
 - b) Write about hierarchy of memory.
 - c) Explain the components of the computer system?
 - d) What is the use of priority interrupts.
 - e) Differentiate between main memory and cache memory.
 - f) What are shift micro- operations?

PART -B

- 2. a) Differentiate between synchronous and Asynchronous modes of data transfer.
 - b) Explain the basic organization of micro-programmed control unit.
- 3. a) Explain about associative memory.
 - b) Explain diary chain priority interrupts.
- 4. a) Briefly explain various peripheral devices used in computer system.
 - b) Explain the basic components of memory management unit?
- 5. a) Differentiate between shift and rotate instructions.
 - b) Write about optical disks.
- 6. a) How data transfer can be controlled using handshaking technique?
 - b) Differentiate between flash memory and cache memory.
- 7. a) What is interrupt? Explain different types of interrupts.
 - b) Write about Direct memory Access.

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PART -A

- 1. a) Write differences between RISC and CISC.
 - b) Mention the advantages of memory hierarchy?
 - c) What is micro-operation?
 - d) What is cache memory? Mention its importance?
 - e) What are i/o peripherals? Mention its advantages.
 - f) What is Direct Memory Access?

PART-B

- 2. a) What is micro operation? Briefly explain the arithmetic micro operation.
 - b) Explain the organization of registers?
- 3. a) Explain the function of typical i/p-o/p interfaces.
 - b) Explain the components of the system.
- 4. a) Write about logic instruction and its significance.
 - b) Write about magnetic hard disks.
- 5. a) Differentiate between peripheral component interconnect (PCI) Bus and universal serial Bus.
 - b) Differentiate between EPROM and EEPROM.
- 6. a) Write about different types of addressing modes.
 - b) Write about branch instruction and its significance.
- 7. a) What are different forms of parallelism?
 - b) What is parity? Give its significance.