

U.G. Department of Computer Applications
N.G.M College, Pollachi
18 UBC 205-COMPUTER SYSTEM ARCHITECTURE

UNIT-1

1. ----- is a group of bit that instruct the computer to perform a specific operation.
 - a. Registers.
 - b. Instruction code.
 - c. Instruction cycle.
 - d. computer instruction.

2. The computer needs-----for manipulating data and a register for holding s memory address.
 - a. Data register
 - b. Address register
 - c. Accumulator
 - d. Processor register

3. Expand TR-----.
 - a. Temporary register
 - b. Transaction register
 - c. Temporary requirements
 - d. Transition register

4. ----- is the most common register, used to store data taken out from the memory.
 - a. Data register
 - b. Accumulator.
 - c. Transaction register
 - d. None

5. ----- is the control unit is designed from scratch using traditional digital logic design techniques to produces a minimal optimized circuit.
 - a. Micro programmed
 - b. Hardwired.
 - c. Both a and b.
 - d. None

6. ----- connected to the address lines of the system bus.
 - a. Memory address register
 - b. Program counter
 - c. Instruction register
 - d. Memory buffer register

7. The basic computer has ----- instruction code formats.
 - a. 2
 - b. 3
 - c. 4
 - d. 5

8. Expand IR----- .
 - a. Integer register
 - b. Instruction regulator
 - c. Instruction register
 - d. None

9. A program is the set of instruction consist of -----.
 - a. Operations
 - b. Operator
 - c. Both a and b
 - d. Register

10. Instruction cycle consist of----- phases.
 - a. Fetch instruction from memory
 - b. An operation code field that specifies the operation to be performed.
 - c. Execute the input
 - d. none.

Key answer

1)b 2)d 3)a 4)b 5)a 6)a 7)b 8)c 9)c 10)a

UNIT-2

1. There are 14 binary selection inputs in the units, and their combination values specifies a-----.
 - a. Control word
 - b. Control register
 - c. Stack
 - d. None

2. Stack is also said to be as-----
 - a. Last in first out
 - b. First in first out
 - c. First in last out
 - d. Last in last out

3. The operation for insertion is called-----
 - a. Pop
 - b. Push
 - c. Both a and b
 - d. None

4. The operation for deletion is called-----
 - a. Push
 - b. Pop
 - c. Stack
 - d. None

5. The bits of instruction are divided into groups called-----
 - a. record
 - b. field
 - c. rows
 - d. columns

6. Expand RISC -----
 - a. Reduced Information Set Computer.
 - b. Register Instruction Set Computer
 - c. Recommendation instruction Set Computer.
 - d. Reduced Instruction Set Computer

7. ----- move data from one place in the computer to another without changing the data content.
 - a. Data transfer Instruction
 - b. Data manipulation instruction
 - c. Program control.
 - e. None

8. How many type of data transfer and manipulation -----
 - a. 4
 - b. 5
 - c. 3
 - d. 6

9. one address instruction use an ----- register for all data manipulation.
 - a. implied accumulator
 - b. register
 - c. processor.
 - d. none

10. ----- is used to reduces the number of bits in the addressing field of the instruction.
 - a. addressing register
 - b. addressing mode
 - c. both a and b
 - d. none.

Key answer:

1) a 2) a 3) b 4) b 5) b 6) d 7) a 8) c 9) a 10) b

Unit -3

1. We make use of _____ circuits to implement multiplication.
 - a. flip flops
 - b. combinational
 - c. fast adders
 - d. none of the above

2. The multiplier is stored in _____.
 - a. PC Register
 - b. Shift Register
 - c. Cache
 - d. none of the above.

3. The _____ is used to coordinate the operation of the multiplier.
 - a. Controller
 - b. Coordinator
 - c. Control sequencer.
 - d. none of the above mentioned

4. The solution to any problem that is stated by a _____ of well-defined procedural steps is called algorithm.
 - a. infinite
 - b. finite
 - c. unique
 - d. none of the above

5. There are _____ ways of representing negative fixed point binary numbers
 - a. 2
 - b. 3
 - c. 4
 - d. none of the above

6. Two _____ circuits are needed to perform the micro operation A-B
 - a. adder
 - b. parallel adder
 - c. Sub tractor

d. parallel Sub tractor.

7. $m \cdot r^e$ in this expression e represents _____

- a. expression
- b. exponent
- c. both a and b
- d. none of the above

8. Range of mantissa and exponent is _____.

- a. 32bits and 12 bits
- b. 34bits and 14 bits
- c. 36bits and 12 bits
- d. none of the above

9. The result is normalised _____ it is transferred to memory.

- a. after
- b. before
- c. both a and b
- d. none of the above.

10. In each input digit does not exceed _____

- a. 6
- b. 7
- c. 9
- d. 15

KEY answer:

1)c, 2)b, 3)c, 4)b, 5)b, 6)d, 7)b, 8)c, 9)b, 10)c.

Unit -4

1. _____ code is referred to as an Input Command.

- a. function
- b. instruction
- c. both a and b
- d. none of the above

2. A status command is used to test various status conditions in the _____ and _____
- interface and command
 - command and register
 - interface and peripheral
 - none of the above
3. _____ is used to transfer data from the bus into one register.
- data input command
 - data output command
 - both a and b
 - none of the above
4. The agreement between two independent unit is known as _____.
- strobe
 - handshaking
 - agreement
 - none of the above
5. Expansion of DMA is _____
- data memory access
 - direct memory access
 - device memory access
 - none of the above
6. _____ procedure is used to identify the highest priority by software means.
- polling
 - priority interrupt
 - vector interrupt
 - none of the above
7. _____ methods of interrupt.
- 2
 - 3
 - 4
 - none of the above

8. Transfer of data by word at a time is called _____
- a. cycle stealing
 - b. bus grant
 - c. both a and b
 - d. none of the above
9. Transfer of data by sequence of word is called _____
- a. burst transfer
 - b. cycle stealing
 - c. both a and b
 - d. none of the above
10. Instructions that are read from memory by an IOP are sometimes called _____
- a. commands
 - b. functions
 - c. register
 - d. none of the above

key answer:

1)a, 2)c, 3)b, 4)b, 5)b, 6)a, 7)b, 8)a, 9)b, 10)a

Unit- 5

1. The memory unit that communicates directly with the CPU is called the _____
- a. auxiliary memory
 - b. main memory
 - c. cache memory
 - d. none of the above
2. Devices that provide backup storage are called _____
- a. auxiliary memory
 - b. main memory
 - c. cache memory
 - d. none of the above

3. A special very high speed memory is called _____
- auxiliary memory
 - main memory
 - cache memory
 - none of the above
4. The OS that operates number of independent process concurrently is called _____
- many programming
 - multiprogramming
 - multitasking
 - none of the above
5. Computer is made up of _____ integrated circuit chips
- RAM
 - ROM
 - register
 - both b and c
6. _____ data transfer allows the transfer from and to the cpu and memory
- directional
 - bidirectional
 - both a and b
 - none of the above
7. The Disk permanently attached and cannot be removed is called _____
- floppy disk
 - hard disk
 - both a and b
 - none of the above
8. The drive that can be removed is called _____
- floppy disk
 - hard disk
 - both a and b
 - none of the above

9. The transfer of data from _____ to _____ is referred to as mapping process.

- a. main memory and cache
- b. cache to main memory
- c. main memory to associative memory
- d. all the above

10. A _____ is a set of logically related instructions or data elements associated with a given name.

- a. segment
- b. break
- c. logical address
- d. all the above

key answer:

1)b 2)a 3)c 4)b 5)a 6)b 7)b 8)a 9)a 10)a

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UNIT-1

K3 Questions:

1. Define Basic Computer Organization and design.
2. Classify Computer Register.
3. Analyze Instruction Set Completeness.
4. Conclude Timing and control with a diagram.
5. Inspect Interrupt cycle.

K4 Questions:

1. Classify Instruction cycle with the types of reference register.
2. List the types of memory reference registers.
3. Compare interrupt cycle with IO interrupts and program interrupt.
4. Compare Input-Output Interrupts IO, Configurations IO Instructions.

UNIT-2

K3 Questions:

1. Examine the Organization of Stack with a neat diagram.
2. Inspect Register Stack in Stack Organization.
3. Examine the Functions of Reverse Polish Notation in Stack Pointer.
4. Discuss the evaluation of Arithmetic expression.
5. Categorize Instruction Formats with a diagram.

K4 Questions:

1. Conclude General Register Organization in CPU.
2. List the various Data Transfer and Manipulation with a diagram.
3. Analyze RISC and program control.
4. Simplify Instruction Modes and Addressing Modes of CPU.

UNIT-3**K3 Questions:**

1. Examine Computer Arithmetic.
2. List the various operations of Addition and Subtraction with signed magnitude data.
3. Compare Hardware Algorithm and Hardware Implementation
4. Conclude the following:
 - 1) Floating point algorithm.
 - 2) Basic configurations
 - 3) Register configurations.

K4 Questions:

1. List Decimal Arithmetic Operation of Computer Arithmetic.
2. Classify Floating Pint Arithmetic Operations in Detail.
3. Conclude Division Algorithm with a flowchart.

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UNIT-4**K3 Questions:**

1. Conclude Peripheral devices with a diagram.
2. List the various Input-Output Interface in I/O Organization.

3. Classify Modes Of Transfer in I/O Organization.
4. Analyze Direct Memory Access (DMA) with a diagram.
5. Examine Input Output Processor in I/O Organization.

K4 Questions:

1. Classify Asynchronous Data Transfer in I/O Organization.
2. Analyze Priority Interrupt with a diagram.
3. Conclude Synchronous and Asynchronous Data Transfer.
4. Analyze Priority Interrupt with a diagram.
5. Categorize Direct Memory Access of I/O Organization.

UNIT-5

K3 Questions:

1. Examine Memory Hierarchy in Memory Organization.
2. Simplify Auxiliary and Associative memory.
3. Examine the Read and Write Operations of Associative Memory with a Page Table.
4. Conclude Set-Associative Mapping in Cache Memory.
5. Compare Virtual Memory Page Replacement and Page Table with a diagram.

K4 Questions:

1. Classify Memory Management Hardware in Memory Organization.
2. Examine Virtual Memory with a Page Table.
3. List the various Mapping in Cache Memory.
4. Analyze Associative Memory in Memory Organization.

