Computer Architecture and Organization

Set – 1

Question 1:
Where does a computer add and compare data?
a. Hard disk
b. Floppy disk
c. CPU chip
d. Memory chip

Question 2:
Which of the following registers is used to keep track of address of the memory location where the next instruction is located?
a. Memory Address Register
b. Memory Data Register
c. Instruction Register
d. Program Register

Question 3:
A complete microcomputer system consists of
a. microprocessor
b. memory
c. peripheral equipment
d. all of above

Question 4:
CPU does not perform the operation
a. data transfer
b. logic operation
c. arithmetic operation
d. all of above

Question 5:
Pipelining strategy is called implement
a. instruction execution
b. instruction prefetch
c. instruction decoding
d. instruction manipulation

Question 6:
A stack is
a. an 8-bit register in the microprocessor
b. a 16-bit register in the microprocessor
c. a set of memory locations in R/WM reserved for storing information temporarily during the execution of computer
d. a 16-bit memory address stored in the program counter

Question 7:

A stack pointer is
a. a 16-bit register in the microprocessor that indicate the beginning of the stack memory.
b. a register that decodes and executes 16-bit arithmetic expression.
c. The first memory location where a subroutine address is stored.
d. a register in which flag bits are stored

Question 8:

The branch logic that provides decision making capabilities in the control unit is known as
a. controlled transfer
b. conditional transfer
c. unconditional transfer
d. none of above

Question 9:

Interrupts which are initiated by an instruction are
a. internal
b. external
c. hardware
d. software

Question 10:

A time sharing system imply
a. more than one processor in the system
b. more than one program in memory
c. more than one memory in the system
d. None of above

Answers:

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

10. b

SET-2

Question 1:
Processors of all computers, whether micro, mini or mainframe must have
a. ALU
b. Primary Storage
c. Control unit
d. All of above

Question 2:
What is the control unit's function in the CPU?
a. To transfer data to primary storage
b. to store program instruction
c. to perform logic operations
d. to decode program instruction

Question 3:
What is meant by a dedicated computer?
a. which is used by one person only
b. which is assigned to one and only one task
c. which does one kind of software
d. which is meant for application software only

Question 4:
The most common addressing techniques employed by a CPU is
a. immediate
b. direct
c. indirect
d. all of the above

Question 5:
Pipeline implement
a. fetch instruction
b. decode instruction
c. fetch operand
d. calculate operand
e. execute instruction
f. all of abve

Question 6:
Which of the following code is used in present day computing was developed by IBM corporation?
a. ASCII
b. Hollerith Code
c. Baudot code
d. EBCDIC code

Question 7:
When a subroutine is called, the address of the instruction following the CALL instructions stored in/on the
a. stack pointer
b. accumulator
c. program counter
d. stack

Question 8:
A microprogram written as string of 0's and 1's is a
a. symbolic microinstruction
b. binary microinstruction
c. symbolic microprogram
d. binary microprogram

Question 9:
Interrupts which are initiated by an instruction are
a. internal
b. external
c. hardware
d. software

Question 10:
Memory access in RISC architecture is limited to instructions
a. CALL and RET
b. PUSH and POP
c. STA and LDA
d. MOV and JMP

Answers:

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

SET-3

Question 1:
A collection of 8 bits is called
a. byte
b. word
c. record
d. nibble

Question 2:
The ascending order or a data Hierarchy is
a. bit - bytes - fields - record - file - database
b. bit - bytes - record - field - file - database
c. bytes - bit- field - record - file - database
d. bytes -bit - record - field - file - database

Question 3:
How many address lines are needed to address each memory locations in a 2048 x 4 memory chip?
a. 10
b. 11
c. 8
d. 12

Question 4:
A computer program that converts an entire program into machine language at one time is called a/an
a. interpreter
b. simulator
c. compiler
d. commander

Question 5:
In immediate addressing the operand is placed
a. in the CPU register
b. after OP code in the instruction
c. in memory
d. in stack

Question 6:
Microprocessor 8085 can address location upto
a. 32K
b. 128K
c. 64K
d. 1M

Question 7:
The ALU and control unit of most of the microcomputers are combined and manufacture on a single silicon chip. What is it called?
a. monochip
b. microprocessor
c. ALU
d. control unit

Question 8:
When the RET instruction at the end of subroutine is executed,
a. the information where the stack is iniatialized is transferred to the stack pointer
b. the memory address of the RET instruction is transferred to the program counter
c. two data bytes stored in the top two locations of the stack are transferred to the program counter
d. two data bytes stored in the top two locations of the stack are transferred to the stack pointer

Question 9:
A microporgram is sequencer perform the operation
a. read
b. write
c. read and write
d. read and execute

Question 10:
Interrupts which are initiated by an I/O drive are
a. internal
b. external
c. software
d. all of above

Answers:

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

ARM MICROCONTROLLER AND EMBEDDED SYSTEMS (15EC62) QUIZ

SET-1

1. ARM stands for _____
a) Advanced Rate Machines
b) Advanced RISC Machines
c) Artificial Running Machines
d) Aviary Running Machines

Ans. b

2. The main importance of ARM micro-processors is providing operation with _____
a) Low cost and low power consumption
b) Higher degree of multi-tasking
c) Lower error or glitches
d) Efficient memory management

Ans. a

3. ARM processors where basically designed for _____
a) Main frame systems
b) Distributed systems
c) Mobile systems
d) Super computers

Ans. c

4. The ARM processors don't support Byte addressability.
a) True
b) False

Ans. b

5. The address space in ARM is _____
a) 2^{24}
b) 2^{64}
c) 2^{16}
d) 2^{32}

Ans. d

6. The address system supported by ARM systems is/are _____
a) Little Endian
b) Big Endian
c) X-Little Endian
d) Both Little & Big Endian

Ans. d

7. Memory can be accessed in ARM systems by _____ instructions.
i) Store
ii) MOVE
iii) Load
iv) arithmetic
v) logical
a) i, ii, iii
b) i, ii
c) i, iv, v
d) iii, iv, v

Ans. b

8. RISC stands for _____
a) Restricted Instruction Sequencing Computer
b) Restricted Instruction Sequential Compiler
c) Reduced Instruction Set Computer
d) Reduced Induction Set Computer

Ans. c

9. In the ARM, PC is implemented using _____
a) Caches
b) Heaps
c) General purpose register
d) Stack

Ans. c

10. The additional duplicate register used in ARM machines are called as _____
a) Copied-registers
b) Banked registers
c) Extra registers
d) External registers

Ans. b

SET-2

1. The banked registers are used for _____
a) Switching between supervisor and interrupt mode
b) Extended storing
c) Same as other general purpose registers
d) None of the mentioned

Ans. a

2. Each instruction in ARM machines is encoded into _____ Word.
a) 2 byte
b) 3 byte
c) 4 byte
d) 8 byte

Ans. c

3. All instructions in ARM are conditionally executed.
a) True
b) False

Ans. a

4. The addressing mode where the EA of the operand is the contents of Rn is _____
a) Pre-indexed mode
b) Pre-indexed with write back mode
c) Post-indexed mode
d) None of the mentioned

Ans. c

5. The effective address of the instruction written in Post-indexed mode, MOVE[Rn]+Rm is _____
a) EA = [Rn]
b) EA = [Rn + Rm]
c) EA = [Rn] + Rm
d) EA = [Rm] + Rn

Ans. a

6. The pseudo instruction used to load an address into the register is _____
a) LOAD
b) ADR
c) ASSIGN
d) PSLOAD

Ans. b

7. _____ symbol is used to signify write back mode.
a) #
b) ^
c) &
d) !

Ans. d

8. The instructions which are used to load or store multiple operands are called as _____
a) Banked instructions
b) Lump transfer instructions
c) Block transfer instructions
d) DMA instructions

Ans. c

9. The Instruction, LDM R10!, {R0,R1,R6,R7} _____
a) Loads the contents of R10 into R1, R0, R6 and R7
b) Creates a copy of the contents of R10 in the other registers except for the above mentioned ones
c) Loads the contents of the registers R1, R0, R6 and R7 to R10
d) Writes the contents of R10 into the above mentioned registers and clears R10

Ans. a

10. The ability to shift or rotate in the same instruction along with other operation is performed with the help of _____
a) Switching circuit
b) Barrel switcher circuit
c) Integrated Switching circuit
d) Multiplexer circuit

Ans. b

SET-3

1. Which one of the following offers CPUs as integrated memory or peripheral interfaces?
a) Microcontroller
b) Microprocessor
c) Embedded system
d) Memory system

Ans. a

2. Which of the following offers external chips for memory and peripheral interface circuits?
a) Microcontroller
b) Microprocessor
c) Peripheral system
d) Embedded system

Ans. b

3. What is CISC?
a) Computing instruction set complex
b) Complex instruction set computing
c) Complimentary instruction set computing
d) Complex instruction set complementary

Ans. b

4. How is the protection and security for an embedded system made?
a) OTP
b) IPR
c) Memory disk security
d) Security chips

Ans. b

5. It retains its content when power is removed. What type of memory is this?
a) Volatile memory
b) Nonvolatile memory
c) RAM
d) SRAM

Ans. b

6. Name a volatile memory.
a) RAM
b) EPROM
c) ROM
d) EEPROM

Ans. a

7. The initial routine is often referred to as
a) Initial program
b) Bootstrap program
c) Final program
d) Initial embedded program

Ans. b

8. Which one of the following is UV erasable?
a) Flash memory
b) SRAM
c) EPROM
d) DRAM

Ans. c

9. What kind of memory does an OTP have?
a) SRAM
b) RAM
c) EPROM
d) DRAM

Ans. c

10. How embedded systems communicate with the outside world?
a) Peripherals
b) Memory
c) Input
d) Output

Ans. a