

QUESTION=setcorrect, MARKS=2.00, CATEGORY=MEDIUM

Choose ALL correct options. In Harvard architecture,

OPTIONS=

- A. data and code use different buses
- B. data and code use different logical and physical memory
- C. data and code use the same bus
- D. data and code use same logical and physical memory
- E.
- F.

ANSWER=A,B

ANSDESC=

ISA in Harvard architecture are designed to have data and code on different buses.

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QUESTION=setcorrect, MARKS=1.00, CATEGORY=MEDIUM

Which of these programming languages is/are independent of the underlying computer architecture?

OPTIONS=

- A. High-level language
- B. Assembly language
- C. Machine language
- D. All languages
- E.
- F.

ANSWER=A

ANSDESC=

Assembly and machine language depend on the computer architecture.

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QUESTION=numeric, MARKS=1.00, CATEGORY=MATH

Consider a computing system whose memory is organized as bytes and is of size 64-bytes. What is the minimum number of address bits required for such a memory configuration?

ANSWER=[6.0, 6.0]

ANSDESC=

Each memory is a byte wide. To address 64 such entries, we need 6 bits (2^6).

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QUESTION=singlecorrect, MARKS=1.00, CATEGORY=EASY

The basic digital device that forms a 1-bit register is

OPTIONS=

- A. D flip-flop
- B. RS flip-flop
- C. NAND gate
- D. NOR gate

ANSWER=A

ANSDESC=

A D flip-flop is usually used as a register element

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QUESTION=singlecorrect, MARKS=1.00, CATEGORY=EASY

The basic digital device that enables a bus to carry valid signals in processors is a

OPTIONS=

- A. Multiple D flip-flops
- B. Binary logic gates
- C. Tri-state logic gates
- D. Multibit wire

ANSWER=C

ANSDESC=

A tri-state enables a bus to selectively allows only one device to write the bus, while other devices read from it.

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QUESTION=singlecorrect, MARKS=1.00, CATEGORY=EASY

In a processor that follows the Fetch-Decode-Execute (stored program) concept, the role of the program counter is to store

OPTIONS=

- A. the address of the next instruction to be fetched
- B. the next instruction to be executed
- C. a count of the instructions executed
- D. a program's start address

ANSWER=A

ANSDESC=

PC is a pointer to the address of the next instruction to be fetched.

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QUESTION=singlecorrect, MARKS=1.00, CATEGORY=EASY

Instructions in 8051 always need a specific operand or data to operate on as part of the instruction.

OPTIONS=

- A. True
- B. False
- C.

ANSWER=B

ANSDESC=

Some instructions have an implicit operand. E.g. RET

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QUESTION=singlecorrect, MARKS=1.00, CATEGORY=EASY

Digital computer systems have

OPTIONS=

- A. only combinational logic circuits
- B. only sequential logic circuits
- C. both combinational and sequential logic circuits
- D.

ANSWER=C

ANSDESC=

Combinational logic circuits in ALU and sequential logic circuits for communication/transfer

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QUESTION=singlecorrect, MARKS=1.00, CATEGORY=EASY

The arithmetic logic unit that performs basic arithmetic operations in a processor is

OPTIONS=

- A. a combinational logic circuit
- B. a sequential logic circuit
- C. both a combinational and sequential logic circuit
- D. neither combinational nor sequential logic circuit

ANSWER=A

ANSDESC=

Combinational logic circuits in ALU

=====

QUESTION=singlecorrect, MARKS=1.00, CATEGORY=EASY

Registers in a processor are typically part of the

OPTIONS=

- A. external RAM
- B. internal RAM
- C. external ROM
- D. internal ROM

ANSWER=B

ANSDESC=

Internal RAM has the registers and hence the access to them is faster.\

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QUESTION=singlecorrect, MARKS=1.00, CATEGORY=EASY

Consider that the 16-bit value 1234H (hexadecimal) is stored in a RAM that stores byte data. 12H is stored in location 30H and 34H is stored in location 31H. What is the type of endianness followed in this computing system?

OPTIONS=

- A. Little endian

B. Big endian

C.

ANSWER=B

ANSDESC=

Combinational logic circuits in ALU

=====

QUESTION=setcorrect, MARKS=1.00, CATEGORY=EASY

Which among the following is an/are indigenous general purpose processor(s) developed in India?

OPTIONS=

A. AJIT processor

B. SHAKTI processor

C. Param processor

D. Vega processor

E.

ANSWER=A,B

ANSDESC=

Combinational logic circuits in ALU

=====

QUESTION=setcorrect, MARKS=1.00, CATEGORY=EASY

Which among the following companies do/does not manufacture microprocessors?

OPTIONS=

A. Microsoft

B. Google

C. Apple

D. Motorola

E.

ANSWER=A

ANSDESC=

Combinational logic circuits in ALU

=====

QUESTION=paper, MARKS=1.00, CATEGORY=MATH

How is 8085 different from 8051 ? Click a picture to submit your answer.

ANSDESC=

answer explanation can be mentioned here

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QUESTION=paper, MARKS=1.00, CATEGORY=MATH

Computer systems that operate on the Fetch-Decode-Execute concept always execute content stored in consecutive memory locations. State true or false. Justify. Click a picture to submit your answer.

ANSDESC=

answer explanation can be mentioned here

=====

QUESTION=singlecorrect, MARKS=1.00, CATEGORY=EASY

Which one among the following options shows the correct order of progression from a programming point of view ?

OPTIONS=

- A. High-level language -> Assembly language -> Machine language
- B. Machine language -> Assembly language -> High-level language
- C. High-level language -> Assembly language -> Binary language -> Machine language
- D. High-level language -> Machine language -> Assembly language
- E.
- F.

ANSWER=A

ANSDESC=

C file to Mnemonics file to hex file.

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QUESTION=fillblanks, BLANKS=1, CATEGORY=HEX

What is the 2's complement representation of FFH in 8-bit binary?

BLANK=text, MARKS=1.0, ANSWER ='00000001'

ANSDESC=

Find two's complement of the number. Do one's complement (flip all bits) and add 1.

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QUESTION=numeric, MARKS=1.00, CATEGORY=MATH

What is the decimal value corresponding to the two's-complement number 10000011?

ANSWER=[-125.0, -125.0]

ANSDESC=

Find two's complement of the number. Do one's complement (flip all bits) and add 1. Since MSB is 1, the corresponding decimal value is negative.

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QUESTION=fillblanks, BLANKS=1, CATEGORY=HEX

What is the hexadecimal representation of 110111110101 ? Do not append 'h' or 'H'.

BLANK=text, MARKS=1.0, ANSWER = '(?i)DF5'

ANSDESC=

Find hex representation of 4 bits starting from the right.

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