Microprocessors 503431-3

Chapter 1

Introduction to the Microprocessor and Computer

تجميعة أسئلة الشابتر الأول

أسئلة الشابتر الأول فقط — مجمّعة من تجميعات الكويزات والميدتيرمات السابقة، والإجابات بخط اليد من المنهج (محاضرة الشابتر الأول)

٥٤ سؤالاً

إعداد وشرح

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لمزيد من الملخّصات والشروح تابع القناة والموقع

▼ حالة إكمال الأسئلة:

السؤال 1

0.5 درجات

حفظ الإجابة

A nibble is 4 bits

✓ صواب

nibble = half a byte
1 byte = 8 bits

- a. صواب
- b. خطأ

السؤال 2

0.5 درجات

حفظ الإجابة

A nibble is 8 bits

✓ خطأ

8 bits = 1 byte
a nibble is 4 bits

- a. صواب
- b. خطأ

السؤال 3

0.5 درجات

حفظ الإجابة

A word is 16-bit

✓ صواب

word = 2 bytes = 16 bits

- a. صواب
- b. خطأ

السؤال 4

0.5 درجات

حفظ الإجابة

A word is

16-bit ✓

a word is two bytes = 16 bits

- a. 16-bit
- b. 32-bit
- c. 4-bit
- d. 8-bit

السؤال 5

0.5 درجات

حفظ الإجابة

A KB is 1024 bytes

✓ صواب

KB = 2^10 bytes = 1024 bytes

a. صواب

b. خطأ

السؤال 6

0.5 درجات

حفظ الإجابة

A MB is 1024 bytes

✓ خطأ

MB = 2^20 bytes = 1024 KB, not bytes

a. صواب

b. خطأ

السؤال 7

0.5 درجات

حفظ الإجابة

A kilobyte is

1024 bytes ✓

KB = 2^10 = 1024 bytes

a. 1024 bytes

b. 1024 K bytes

c. 1024 M bytes

d. 1024 G bytes

السؤال 8

0.5 درجات

حفظ الإجابة

A megabyte is

1024 K bytes ✓

MB = 2^20 bytes = 1024 KB

a. 1024 bytes

b. 1024 K bytes

c. 1024 M bytes

d. 1024 G bytes

السؤال 9

0.5 درجات

حفظ الإجابة

1024 M bytes ✓

GB = 2^30 bytes
= 1024 MB

A gigabyte is

a. 1024 bytes
b. 1024 K bytes
c. 1024 M bytes
d. 1024 G bytes

السؤال 10

0.5 درجات

حفظ الإجابة

1024 G bytes ✓

TB = 2^40 bytes
= 1024 GB

A terabyte is

a. 1024 bytes
b. 1024 K bytes
c. 1024 M bytes
d. 1024 G bytes

السؤال 11

0.5 درجات

حفظ الإجابة

✓ صواب

random access memory
also called read / write

RAM stands for random access memory

a. صواب
b. خطأ

السؤال 12

0.5 درجات

حفظ الإجابة

✓ خطأ

RAM is volatile
loses data with no power

RAM is a nonvolatile memory

a. صواب
b. خطأ

السؤال 13 درجات 0.5 حفظ الإجابة

ROM is a nonvolatile memory

✓ صواب

read only memory
keeps data with no power

a. صواب
b. خطأ

السؤال 14 درجات 0.5 حفظ الإجابة

The function of CPU (Central Processing Unit) is to execute (process) information stored in memory

✓ صواب

the CPU executes
what memory holds

a. صواب
b. خطأ

السؤال 15 درجات 0.5 حفظ الإجابة

CPU

a ✓

a. is process information stored in memory
b. transfers information between the microprocessor and its memory and I/O address space
c. requests a memory location from the memory or an I/O location from the CPU
d. contains lines that select the memory or I/O and cause them to perform a read or write operation

a is process information stored in memory → this is the CPU
b transfers information ... → that is the data bus
c requests a memory / I/O location → that is the address bus
d contains lines that select and read/write → that is the control bus

السؤال 16 درجات 0.5 حفظ الإجابة

CPU transfers information between the microprocessor and its memory and I/O address space

a. صواب
b. خطأ

✓ خطأ

that is the data bus
the CPU processes
data

السؤال 17 درجات 0.5 حفظ الإجابة

A Bus is a common group of wires that interconnect components in a computer system. The buses that interconnect the sections of a computer system transfer address, data, and control information between the microprocessor and its memory and I/O systems

a. صواب
b. خطأ

✓ صواب

address + data +
control
join the sections

السؤال 18 درجات 0.5 حفظ الإجابة

The address bus requests a memory location from the memory or an I/O location from the CPU

a. صواب
b. خطأ

✓ صواب

it picks the location
I/O: 0000H to
FFFFH

السؤال 19 درجات 0.5 حفظ الإجابة

The data bus requests a memory location from the memory or an I/O location from the CPU

a. صواب
b. خطأ

✓ خطأ

the address bus does
the data bus carries
data

السؤال 20 درجات 0.5 حفظ الإجابة

✓ صواب

8 up to 64 bits wide across the Intel family

The data bus transfers information between the microprocessor and its memory and I/O address space

a. صواب
b. خطأ

السؤال 21 درجات 0.5 حفظ الإجابة

✓ خطأ

the data bus transfers address bus only selects

The address bus transfers information between the microprocessor and its memory and I/O address space

a. صواب
b. خطأ

السؤال 22 درجات 0.5 حفظ الإجابة

✓ خطأ

the data bus transfers control bus = read / write

The Control bus transfers information between the microprocessor and its memory and I/O address space

a. صواب
b. خطأ

السؤال 23 درجات 0.5 حفظ الإجابة

✓ صواب

selects memory or I/O
then read or write

The control bus contains lines that select the memory or I/O and cause them to perform a read or write operation

a. صواب
b. خطأ

السؤال 24 0.5 درجات حفظ الإجابة

The data bus

a. transfers information between the microprocessor and its memory and I/O address space ○

b. requests a memory location from the memory or an I/O location from the CPU ○

c. contains lines that select the memory or I/O and cause them to perform a read or write operation ○

d. is process information stored in memory ○

السؤال 25 0.5 درجات حفظ الإجابة

16 MB ✓

A given computer has a 24-bit address bus. So, the total amount of memory is:

a. 1 MB ○

b. 4 MB ○

c. 16 MB ○

d. 4 GB ○

each address line doubles the number of locations , so n lines give 2^n
2^24 = 2^20 x 2^4 = 1 M x 16 = 16 M locations , one byte each
→ 16 MB (this is the 80286)

السؤال 26 0.5 درجات حفظ الإجابة

4 GB ✓

A 32-bit address bus can locate

a. 1 MB ○
b. 4 MB ○
c. 1 GB ○
d. 4 GB ○

n address lines give 2^n locations , one byte each
2^32 = 2^30 x 2^2 = 1 G x 4 = 4 G locations
→ 4 GB (the 80386 and up)

السؤال 27 0.5 درجات حفظ الإجابة

✓ صواب

The microprocessor performs three main tasks for the computer system: 1. Data transfer between itself and the memory or I/O systems. 2. Simple arithmetic and logic operations. 3. Program flow via simple decisions. Albeit these are simple tasks, but through them, the microprocessor performs virtually any series of operations or tasks.

a. صواب ○
b. خطأ ○

the three tasks, exactly as the lecture lists them :
1 data transfer between itself and the memory or I/O systems
2 simple arithmetic and logic operations
3 program flow via simple decisions

السؤال 28 0.5 درجات حفظ الإجابة

8080 ✓

A first of the 8-bit general purpose microprocessor is

8080, in 1973
the 4004 was 4-bit

a. 8080 ○
b. 8008 ○
c. 8088 ○
d. 4004 ○

السؤال 29

درجات 0.5

حفظ الإجابة

A 8086 is a first of the 8-bit general purpose microprocessor

✓ خطأ

8086 is 16-bit
8080 is the first 8-bit

a. صواب
b. خطأ

السؤال 30

درجات 0.5

حفظ الإجابة

A first of 16-bit microprocessor is

8086 ✓

8086 in 1978
8088 a year later

a. 8085
b. 8086
c. 8088
d. 80286

السؤال 31

درجات 0.5

حفظ الإجابة

A 8086 is a first of 16-bit microprocessor

✓ صواب

released 1978
first 16-bit

a. صواب
b. خطأ

السؤال 32

درجات 0.5

حفظ الإجابة

A 8088 is a first of 16-bit microprocessor

✓ خطأ

the 8086 came first
8088 about a year later

a. صواب
b. خطأ

السؤال 33 درجات 0.5 حفظ الإجابة

80386 ✓

80386 in 1986
32-bit data + address

A first of 32-bit microprocessor is

a. 80386
b. 80286
c. 80486
d. 80586

السؤال 34 درجات 0.5 حفظ الإجابة

✓ صواب

1986, first practical 32-bit machine

A 80386 is a first of 32-bit microprocessor

a. صواب
b. خطأ

السؤال 35 درجات 0.5 حفظ الإجابة

64 KB ✓

64 KB = 4 x the 16 KB of the 8008

The memory of the 8080 microprocessor is

a. 4 KB
b. 1 MB
c. 16 KB
d. 64 KB

السؤال 36 درجات 0.5 حفظ الإجابة

✓ خطأ

the 8080 is 64 KB
16 KB is the 8008

The memory of the 8080 microprocessor is 16 KB

a. صواب
b. خطأ

السؤال 37 درجات 0.5 حفظ الإجابة

The memory of the 8080 microprocessor is 64 KB

✓ صواب

4 x the memory of the 8008

a. صواب
b. خطأ

السؤال 38 درجات 0.5 حفظ الإجابة

The memory of the 8088 microprocessor is 1 MB

✓ صواب

8086 and 8088 = 1 M
20-bit address bus

a. صواب
b. خطأ

السؤال 39 درجات 0.5 حفظ الإجابة

The memory of the 8088 microprocessor is 16 MB

✓ خطأ

the 8088 is 1 MB
16 MB is the 80286

a. صواب
b. خطأ

السؤال 40 درجات 0.5 حفظ الإجابة

The memory of the 80286 microprocessor is

16 MB ✓

16 MB instead of the 1 MB of the 8086

a. 1 MB
b. 16 MB
c. 1 GB
d. 4 GB

السؤال 41 درجات 0.5 حفظ الإجابة

The memory of the 80286 microprocessor is 1 MB

✓ خطأ

the 80286 is 16 MB
1 MB is the
8086/8088

- a. صواب
- b. خطأ

السؤال 42 درجات 0.5 حفظ الإجابة

The 80486 processor has

one ✓

one execution engine
the Pentium has two

- a. one execution engine
- b. two execution engine
- c. three execution engine
- d. more execution engine

السؤال 43 درجات 0.5 حفظ الإجابة

The 80486 microprocessor has two execution engine

✓ خطأ

the 80486 has one
two starts at
Pentium

- a. صواب
- b. خطأ

السؤال 44 درجات 0.5 حفظ الإجابة

The Pentium processor has

two ✓

two - superscalar
2 instructions at
once

- a. four execution engine
- b. one execution engine
- c. three execution engine
- d. two execution engine

السؤال 45 درجات 0.5 حفظ الإجابة

The Pentium microprocessor has one execution engine

✓ خطأ

the Pentium has two superscalar

a. صواب
b. خطأ

السؤال 46 درجات 0.5 حفظ الإجابة

The Pentium microprocessor has two execution engine

✓ صواب

superscalar
two pipelines

a. صواب
b. خطأ

السؤال 47 درجات 0.5 حفظ الإجابة

The Pentium Pro processor has

three ✓

three - up to 3 instructions at a time

a. one execution engine
b. two execution engine
c. three execution engine
d. four execution engine

السؤال 48 درجات 0.5 حفظ الإجابة

The Pentium Pro microprocessor has three execution engine

✓ صواب

3 execution engines
P6 core

a. صواب
b. خطأ

السؤال 49

درجات 0.5

حفظ الإجابة

The Pentium Pro microprocessor has two execution engine

a. صواب

b. خطأ

خطأ ✓

Pentium Pro has three
two is the Pentium

السؤال 50

درجات 0.5

حفظ الإجابة

The Pentium 2 microprocessor has three execution engine

a. صواب

b. خطأ

صواب ✓

P6 core, same as the Pentium Pro

السؤال 51

درجات 0.5

حفظ الإجابة

The Pentium 2 microprocessor has two execution engine

a. صواب

b. خطأ

خطأ ✓

Pentium 2 has three
two is the Pentium

السؤال 52

درجات 0.5

حفظ الإجابة

The Pentium 4 processor has

a. one execution engine

b. four execution engine

c. two execution engine

d. three execution engine

three ✓

three - it uses the Intel P6 architecture

السؤال 53

0.5 درجات

حفظ الإجابة

d ✓

run 2 instructions at the same time

Superscalar means that the processor can

a. fetch and save at the same time ○

b. fetch and execute at the same time ○

c. fetch and count at the same time ○

d. execute two instructions at the same time ○

السؤال 54

0.5 درجات

حفظ الإجابة

b ✓

fetch and execute together - the queue

Pipelining means that the CPU can

a. fetch and save at the same time ○

b. fetch and execute at the same time ○

c. fetch and count at the same time ○

d. execute two instructions at the same time ○