



Kien truc may tinh va hop ngu\_ Nhóm 04

 Nhà của tôi /  Các khoá học của tôi / 2020\_2021\_HK1\_Daitra / Kien truc may tinh va hop ngu\_ Nhóm 04 / Mô tả tóm tắt nội dung môn học / Mid Term Test No-1

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Câu hỏi 1

Hoàn thành  
Đạt điểm 10,00

Consider three different processors P1, P2, and P3 executing the same instruction set with the clock rates and CPIs given in the following table.

In case b, Which processor has the highest performance expressed in instructions per second?

	Processor	Clock Rate	CPI
a.	P1	3 GHz	1.5
	P2	2.5 GHz	1.0
	P3	4 GHz	2.2
b.	P1	2 GHz	1.2
	P2	3 GHz	0.8
	P3	4 GHz	2.0

Select one:

- ☐ P1 and P2 has the highest performance
- ☒ P2 has the highest performance
- ☐ P1 has the highest performance
- ☐ P3 has the highest performance

Câu hỏi 2

Hoàn thành  
Đạt điểm 1,00

Which memory unit has lowest access time?

Select one:

- ☐ Magnetic Disk
- ☐ Cache
- ☐ Main Memory
- ☒ Registers

Câu hỏi 3

Hoàn thành  
Đạt điểm 1,00

In the CPU, what is the functionality of the control unit?

Select one:

- ☐ To transfer data to primary storage
- ☐ To decode program instruction
- ☐ To store program instruction
- ☒ To perform logic operations

Câu hỏi 4

Hoàn thành  
Đạt điểm 1,00

CPU fetches the instruction from memory according to the value of

Select one:

- ☐ instruction register
- ☒ program counter
- ☐ program status word
- ☐ status register

Câu hỏi 5

Hoàn thành  
Đạt điểm 10,00

Consider a single-level paging system with 12-bit virtual addresses, 24-bit physical addresses, and a 256 ( $2^8$ ) byte page size. A process P1 has the following page table. Frame numbers are given in hexadecimal notation (recall that each hexadecimal digit represents 4 bits)

Page Number	Frame Number
0	0x1010
1	0x2034
2	0x43AC
3	0x1100
4	0xAC11
5	0x8000

Give physical address : 0xAC1100. Convert into virtual address

Select one:

- ☐ 0x300
- ☒ 0x400
- ☐ 0x500
- ☐ 0x600

Câu hỏi 6

Hoàn thành  
Đạt điểm 2,00

How much address lines are required to address each memory location in a 2048 x 4 memory chip?

Select one:

- ☐ 14
- ☒ 11
- ☐ 12
- ☐ 13



Câu hỏi 7

Hoàn thành  
Đạt điểm 10,00

Consider two different implementations, M1 and M2, of the same instruction set. There are three classes of instructions (A, B, and C) in the instruction set. M1 has a clock rate of 80 MHz and M2 has a clock rate of 100 MHz. The average number of cycles for each instruction class and their frequencies (for a typical program) are as follows:

Calculate the average CPI for each machine, M1, and M2

Instruction Class	Machine M1 – Cycles/Instruction Class
A	1
B	2
C	4

Select one:

- ☐ CPI-M1 = 2.6, CPI-M2 = 1.6
- ☒ CPI-M1 = 1.6, CPI-M2 = 2.5
- ☐ CPI-M1 = 1, CPI-M2 = 2.5
- ☐ CPI-M1 = 1.6, CPI-M2 = 2

Câu hỏi 8

Hoàn thành  
Đạt điểm 1,00

A group of bits that tell the computer to perform a specific operation is known as

Select one:

- ☐ Micro-operation
- ☐ Accumulator
- ☒ Instruction code
- ☐ Register

Câu hỏi 9

Hoàn thành  
Đạt điểm 1,00

Through which technique, the speed imbalance between memory access and CPU operation can be reduced?

Select one:

- ☒ Cache memory
- ☐ Reducing the size of memory
- ☐ Memory interleaving and Cache memory
- ☐ Memory interleaving

Câu hỏi 10

Hoàn thành  
Đạt điểm 1,00

Von Neumann architecture is

Select one:

- ☒ SISD
- ☐ MISD
- ☐ MIMD
- ☐ SIMD



Câu hỏi  
11

Hoàn thành  
Đạt điểm 1,00

The memory unit that communicates directly with the CPU is called the

Select one:

- ☐ auxiliary memory
- ☐ Secondary memory
- ☒ main memory
- ☐ shared memory

Câu hỏi  
12

Hoàn thành  
Đạt điểm 5,00

Consider the following paging memory system: There are 4 page table entries (with values of 0xC, 0x2, 0x8, 0x5 for entries 0... 3, respectively). The physical memory is 128 bytes, with frames of 8 bytes each.

What is the physical address (in hex) that corresponds to virtual address 0x03?

Select one:

- ☐ 0x33
- ☐ 0x31
- ☐ 0x32
- ☒ 0x34

Câu hỏi  
13

Hoàn thành  
Đạt điểm 2,00

In comparison with static RAM memory, the dynamic RAM memory has

Select one:

- ☐ None
- ☐ Lower bit density and higher power consumption
- ☒ Higher bit density and low power consumption
- ☐ Lower bit density and lower power consumption

Câu hỏi  
14

Hoàn thành  
Đạt điểm 1,00

A dynamic RAM consists of

Select one:

- ☒ 1 transistor and 1 capacitor
- ☐ 6 transistors
- ☐ 2 transistors and 2 capacitors
- ☐ None

Câu hỏi  
15

Hoàn thành  
Đạt điểm 1,00

PC Program Counter is also called .....

Select one:

- ☐ data counter
- ☐ file pointer
- ☐ memory pointer
- ☒ instruction pointer

Câu hỏi  
16

Hoàn thành  
Đạt điểm 1,00

What is the correct sequence of time delays that happen during a data transfer from a disk to memory?

Select one:

- ☐ Latency time, access time, transfer time
- ☐ Seek time, access time, transfer time
- ☒ Seek time, latency time, transfer time
- ☐ Access time, Latency time, transfer time

Câu hỏi  
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Hoàn thành  
Đạt điểm 1,00

The communication between the components in a microcomputer takes place via the address and

Select one:

- ☐ I/O bus
- ☐ Address bus
- ☒ Data bus
- ☐ Control lines

Câu hỏi  
18

Hoàn thành  
Đạt điểm 2,00

If the main memory is of 8K bytes and the cache memory is of 2K words. It uses associative mapping. Then each word of cache memory shall be

Select one:

- ☐ 11 bits
- ☒ 16 bits
- ☐ 21 bits
- ☐ 20 bits

Câu hỏi  
19

Hoàn thành  
Đạt điểm 1,00

Cache memory acts between

Select one:

- ☐ None
- ☐ CPU and Hard Disk
- ☒ CPU and RAM
- ☐ RAM and ROM

Câu hỏi  
20

Hoàn thành  
Đạt điểm 2,00

What is a computer program called that converts an entire program into machine language at one time?

Select one:

- ☐ Commander
- ☒ Compiler
- ☐ Interpreter
- ☐ Simulator

Câu hỏi  
21

Hoàn thành  
Đạt điểm 1,00

Which one of the following is the address generated by CPU?

Select one:

- ☒ logical address
- ☐ absolute address
- ☐ physical address
- ☐ none

Câu hỏi  
22

Hoàn thành  
Đạt điểm 1,00

A collection of lines that connects several devices is called .....

Select one:

- ☒ Bus
- ☐ peripheral connection wires
- ☐ internal wires
- ☐ None



Câu hỏi  
23

Hoàn thành  
Đạt điểm 1,00

\_\_\_\_\_ registers can interact with the secondary storage:

- Select one:
- ☐ IR
  - ☐ PC
  - ☐ R0
  - ☒ MAR

Câu hỏi  
24

Hoàn thành  
Đạt điểm 1,00

The register which contains the data to be written into or read out of the addressed location is called

- Select one:
- ☐ Index register
  - ☐ Program counter
  - ☐ Memory address register
  - ☒ Memory data register

Câu hỏi  
25

Hoàn thành  
Đạt điểm 1,00

An n-bit microprocessor has

- Select one:
- ☒ n-bit instruction register
  - ☐ n-bit program counter
  - ☐ n-bit ALU
  - ☐ n-bit address register

Câu hỏi  
26

Hoàn thành  
Đạt điểm 1,00

Memory consisting of electronic circuits attached into silicon chip is known as

- Select one:
- ☒ Semiconductor memory
  - ☐ Thin film memory
  - ☐ None
  - ☐ Magnetic core memory

Câu hỏi  
27

Hoàn thành  
Đạt điểm 1,00

Status bit is also called

- Select one:
- ☒ Flag bit
  - ☐ Binary bit
  - ☐ Signed bit
  - ☐ Unsigned bit

Câu hỏi  
28

Hoàn thành  
Đạt điểm 2,00

What characteristic of RAM memory makes it not suitable for permanent storage?

- Select one:
- ☐ unreliable
  - ☒ it is volatile
  - ☐ too bulky
  - ☐ too slow



Câu hỏi  
29

Hoàn thành  
Đạt điểm 1,00

Which of the following is not typically found in the status register of a micro processor ?

Select one:

- ☐ Overflow
- ☒ None
- ☐ Zero result
- ☐ Negative result

Câu hỏi  
30

Hoàn thành  
Đạt điểm 1,00

Where does the decoded instruction is stored in?

Select one:

- ☐ PC
- ☐ MDR
- ☒ IR
- ☐ Registers

Câu hỏi  
31

Hoàn thành  
Đạt điểm 1,00

A computer add and compare data at \_\_\_\_\_?

Select one:

- ☒ CPU chip
- ☐ Hard disk
- ☐ Floppy disk
- ☐ Memory chip

Câu hỏi  
32

Hoàn thành  
Đạt điểm 1,00

Which of the following statements is true ?

Select one:

- ☒ Stack works on the principle of LIFO
- ☐ PC points to the last instruction that was executed
- ☐ All
- ☐ ROM is a Read / Write memory

Câu hỏi  
33

Hoàn thành  
Đạt điểm 1,00

Cache memory works on the principle of

Select one:

- ☒ Locality of reference
- ☐ Locality of reference & memory
- ☐ Locality of memory
- ☐ Locality of data

Câu hỏi  
34

Hoàn thành  
Đạt điểm 5,00

How many 32K × 1 RAM chips are needed to provide a memory capacity of 256 K-bytes

Select one:

- ☐ 8
- ☐ 32
- ☒ 64
- ☐ 128

Câu hỏi  
35

Hoàn thành  
Đạt điểm 2,00

SIMD represents an organization that \_\_\_\_\_

Select one:

- ☐ None
- ☐ represents organization of single computer containing a control unit, processor unit and a memory unit
- ☒ includes many processing units under the supervision of a common control unit
- ☐ refers to a computer system capable of processing several programs at the same time.

Câu hỏi  
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Hoàn thành  
Đạt điểm 1,00

What is the content of Stack Pointer (SP)?

Select one:

- ☒ Address of the top element of the stack
- ☐ Address of the next instruction
- ☐ Size of the stack
- ☐ Address of the current instruction

Câu hỏi  
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Hoàn thành  
Đạt điểm 2,00

Which of the following is lowest in memory hierarchy?

Select one:

- ☒ Secondary memory
- ☐ Cache memory
- ☐ RAM
- ☐ Registers

Câu hỏi  
38

Hoàn thành  
Đạt điểm 10,00

Consider the unpipelined machine with 10ns clock cycles. It uses four cycles for ALU operations and branches where as five cycles for memory opeartions. Assume that the relative frequencies of these operations are 40%,20% and 40% respectively. Let due to clock skew and set up pipelining, the machine adds 1 ns of overhead to the clock. How much speed in instruction execution rate will we gain from pipeline ?

Select one:

- ☐ 5
- ☐ 3
- ☐ 6
- ☒ 4

◀ Announcements

Chuyển tới...

Danh sách sv theo ca ▶