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/ [Final term PART 1: Chapters 6,7,8,9, and 10 Examination.](#)

**Started on** Tuesday, August 6, 2019, 7:06 PM

**State** Finished

**Completed on** Tuesday, August 6, 2019, 9:03 PM

**Time taken** 1 hour 56 mins

**Grade** 18.00 out of 20.00 (90%)

**Question 1**

Correct

1.00 points out of 1.00

SRAM is a very fast memory and it doesn't need to be refreshed like DRAM does.

Select one:

- ☒ True ✓
- ☐ False

The correct answer is 'True'.

Question **2**

Correct

1.00 points out of 1.00

**Superscalar architectures include a single execution unit such as specialized integer and floating-point adders and multipliers.**

Select one:

- ☐ True
- ☒ False ✓

**Superscalar architectures include multiple execution units such as specialized integer and floating-point adders and multipliers.**

The correct answer is 'False'.

Question 3

Correct

1.00 points out of 1.00

**Tightly coupled multiprocessor systems**

Select one:

- ☐ a. Share a common memory and different set of I/O devices
- ☐ b. None of the mentioned
- ☒ c. Share a common memory and the same set of I/O devices ✓
- ☐ d. Share different memories and different set of I/O devices

Your answer is correct.

The correct answer is: **Share a common memory and the same set of I/O devices**

**Question 4**

Correct

1.00 points out of 1.00

**Embedded systems are resource constrained. Utilization of memory and power are critical. The economy of hardware and software is often paramount and can affect design decisions**

Select one:

- ☒ True ✓
- ☐ False

The correct answer is 'True'.

Question **5**

Correct

1.00 points out of 1.00

**A serial data transmission link uses**

Select one:

- ☐ a. One wire
- ☐ b. Eight wires
- ☐ c. Nine wires
- ☒ d. Two wires ✓

Your answer is correct.

The correct answer is: Two wires

Question 6

Correct

1.00 points out of 1.00

In the context of operating systems, protected environments such as logical partitions are

Select one:

- ☐ a. Enabling technology consolidating few servers within the confines of a single large system
- ☒ b. Enabling technology consolidating hundreds of small servers within the confines of a single large system ✓
- ☐ c. Enabling technology consolidating hundreds of large servers within the confines of multiple large systems
- ☐ d. Enabling technology consolidating large servers within the confines of a single large system

Your answer is correct.

The correct answer is: **Enabling technology consolidating hundreds of small servers within the confines of a single large system**

**Question 7**

Correct

1.00 points out of 1.00

**In a computer environment, slow I/O device(s) will impact system performance due to a so-called ripple effect**

Select one:

- ☒ True ✓
- ☐ False

The correct answer is 'True'.

**Question 8**

Correct

1.00 points out of 1.00

**Database physical schema is computer's view of the database that includes locations of physical files and indexes.**

Select one:

- ☒ True ✓
- ☐ False

The correct answer is 'True'.

Question 9

Correct

1.00 points out of 1.00

**I/O subsystems comprise of**

Select one:

- ☐ a. **Blocks of main memory, buses, and special cabling**
- ☐ b. **Blocks of main memory, buses, and special compiler**
- ☒ c. **Blocks of main memory, buses, interfaces and special cabling** ✓
- ☐ d. **Blocks of main memory, buses, and special interpreter**

Your answer is correct.

The correct answer is: **Blocks of main memory, buses, interfaces and special cabling**



Question 10

Correct

1.00 points out of 1.00

The ways in which I/O's can be controlled are

Select one:

- ☐ a. Programmed I/O, Memory-Mapped I/O, Direct Memory Access, and Channel I/O.
- ☐ b. Programmed I/O, Interrupt-Driven I/O, Memory-Mapped I/O, and Channel I/O.
- ☐ c. Programmed I/O, Interrupt-Driven I/O, Direct Memory Access, and Channel I/O.
- ☒ d. Programmed I/O, Interrupt-Driven I/O, Memory-Mapped I/O, Direct Memory Access, and Channel I/O. ✓

Your answer is correct.

The correct answer is: **Programmed I/O, Interrupt-Driven I/O, Memory-Mapped I/O, Direct Memory Access, and Channel I/O.**

Question **11**

Correct

1.00 points out of 1.00

**Effective Access Time is calculated using**

Select one:

- ☐ a. Acces times, hit rates, and miss penalties.
- ☒ b. Acces times, hit rates, and miss rates ✓
- ☐ c. Hit rates, miss rates, and miss penalties.
- ☐ d. Acces times, hit rates, miss rates, and miss penalties.

Your answer is correct.

The correct answer is: Acces times, hit rates, and miss rates.

Question **12**

Correct

1.00 points out of 1.00

In content addressable cache memory, a subset of the bits of the main memory address called fields are organized as

Select one:

- ☐ a. Set, **Tag**, **Flag**, **Block**, and offset fields
- ☒ b. **Tag**, **Block** and offset fields ✓
- ☐ c. Set, **Tag**, and offset fields
- ☐ d. Set, **Tag**, **Block**, and offset fields

Your answer is correct.

The correct answer is: **Tag, Block and offset fields**

Question **13**

Correct

1.00 points out of 1.00

**In off-the-shelf embedded hardware, minimal hardware customization is possible**

Select one:

- ☒ True ✓
- ☐ False

The correct answer is 'True'.

Question **14**

Incorrect

0.00 points out of 1.00

**MIMD architectures may be viewed as**

Select one:

- ☐ a. **A collection of workstations where a group of workstations brought together to solve a general problem**
- ☒ b. **A collection of workstations where many workstations coordinates the actions of the other** ❌
- ☐ c. **A collection of workstations where a cluster of homogenous systems will form a dedicated system**
- ☐ d. **A collection of workstations where one workstation coordinates the actions of the others**

Your answer is incorrect.

The correct answer is: **A collection of workstations where one workstation coordinates the actions of the others**

Question **15**

Correct

1.00 points out of 1.00

One of the **process management tasks** is

Select one:

- ☐ a. **Creates processes, deletes processes, and deallocates resources that were allocated during process execution**
- ☐ b. **Schedules access to resources deletes processes, and deallocates resources that were allocated during process execution**
- ☐ c. **Schedules access to processes and deallocates resources that were allocated during process execution**
- ☒ d. **Creates processes, schedules their access to resources, deletes processes, and deallocates resources that were allocated during process execution** ✓

Your answer is correct.

The correct answer is: **Creates processes, schedules their access to resources, deletes processes, and deallocates resources that were allocated during process execution**

**Question 16**

Incorrect

0.00 points out of 1.00

**Embedded systems programmers need not understand every detail about the hardware**

Select one:

- ☒ True ✖
- ☐ False

The correct answer is 'False'.

**Question 17**

Correct

1.00 points out of 1.00

**Parallel processing is capable of economically increasing system throughput while providing better fault tolerance**

Select one:

- ☒ True ✔
- ☐ False

The correct answer is 'True'.

Question **18**

Correct

1.00 points out of 1.00

**RISC have, amongst other specifications,**

Select one:

- ☒ a. **Single-cycle instructions, fixed length instructions, with few addressing modes** ✓
- ☐ b. **Single-cycle instructions, variable length instructions, with few addressing modes.**
- ☐ c. **Single-cycle instructions, fixed length instructions, parameter passing through memory, with few addressing modes.**
- ☐ d. **Single-cycle instructions, fixed length instructions, microprogrammed control, with few addressing modes.**

Your answer is correct.

The correct answer is: **Single-cycle instructions, fixed length instructions, with few addressing modes.**



Question 19

Correct

1.00 points out of 1.00

Virtual memory uses

Select one:

- ☐ a. Part of main memory and none of the hard drive
- ☐ b. Part of main memory and all of the hard drive
- ☒ c. Part of main memory and part of the hard drive ✓
- ☐ d. No part of main memory and all of the hard drive

Your answer is correct.

The correct answer is: Part of main memory and part of the hard drive

Question **20**

Correct

1.00 points out of 1.00

For the **software in embedded systems**, memory limitations are almost always a software development constraint and this is due to **lack of input and output memory mapping**

Select one:

- ☐ True
- ☒ False ✓

The correct answer is 'False'.