# True/False

1. Embedded systems can be found in simple items like coffeemakers and tennis shoes.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Easy

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2. General-purpose computers do not need watchdog timers because they interact directly with human beings.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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# Multiple Choices Static

3. PLD means

A. programmable logic display

B. programmable logic device

C. programmers logic device

D. programmable language device

<Answer: B>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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# True/False

4. VHDL syntax is similar to the Ada programming language.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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# Multiple Choices Static

5. The behavioral model of the system is checked against the simulated processor in a process called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

A. coverification

B. covalidation

C. coverance

D. conherance

<Answer: A>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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# True/False

6. Embedded systems rarely use virtual memory.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Easy

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# Multiple Choices Static

7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ specifications include provisions for timers, signals, shared memory, scheduling, and mutexes.

A. POSIX reel-time

B. POSIX mean-time

C. POSIX real-time

D. POSIX read-time

<Answer: C>

Topic: An Overview of Embedded Hardware

Difficulty: Difficult

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8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_is a lean version of Windows 8 with features specific to supporting the Windows phone platform.

A. Windows Phone 8.2

B. Windows Phone 8.i

C. Windows Phone 8

D. Windows Phone 8e

<Answer: C>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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# True/False

9. An ICE is a test instrument that integrates microprocessor execution control, memory access (read/write), and real-time trace, among other things.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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10. The unstructured code in embedded system is called “spaghetti” code.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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11. Embedded operating systems allow direct hardware access.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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# Multiple Choices Static

12. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ contains constants and literals used by the embedded program.

A. Read-only memory

B. RAM

C. Flash memory

D. Register

<Answer: A>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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13. The embedded systems programmer typically writes programs exclusively in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and does not have the luxury of after-the-fact performance tuning.

A. assembly language

B. machine language

C. code language

D. binary language

<Answer: A>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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# True/False

14. VHDL is an abbreviation for Very high-speed integrated system Hardware Design Language.

<Answer: False>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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15. PLA and PAL chips are referred to as complex programmable logic devices (CPLDs).

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Easy

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16. If the processor is power constrained, its designer has to run the clock slowly so that the event is successfully implemented in embedded systems.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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17. In embedded systems, the events can happen asynchronously and can occur in any order.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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18. The problem with unstructured code in embedded system is that it can be hard to maintain.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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# Multiple Choices Static

19. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are invoked in response to various signals as they are raised on the pins of the processor.

A. ISR programs

B. IRS programs

C. SRI programs

D. SIR programs

<Answer: A>

Topic: An Overview of Embedded Hardware

Difficulty: Difficult

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# True/False

20. Difference between SpecC and SystemC is that SpecC includes a design methodology as part of the package.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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# True/False

21. Voice over IP (VOIP) is an example of high-density embedded systems.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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# Multiple Choices Static

22. Microcontroller memory is usually measured in kilobytes, and SOCs can include memory on the order of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

A. bytes

B. kilobytes

C. megabytes

D. gigabytes

<Answer: C>

Topic: An Overview of Embedded Hardware

Difficulty: Easy

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# True/False

23. FPGA logic elements are interconnected through a routing architecture that consists of transistors and connection multiplexers.

<Answer: False>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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# Multiple Choices Static

24. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_languages allow a designer to specify circuit behavior on an algorithmic level.

A. Hard definition

B. Hardware definition

C. Hardware direction

D. Hardware display

<Answer: B>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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# True/False

25. SystemC is an extension of C++ that is used in embedded systems using oops concepts.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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26. An operating system that is widely used in embedded systems is MS-DOS.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Easy

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27. A single embedded system cannot contain random access memory (RAM), ROM, and flash memory.

<Answer: False>

Topic: An Overview of Embedded Hardware

Difficulty: Difficult

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28. Embedded operating systems are all real-time operating systems.

<Answer: False>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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# Multiple Choices Static

29. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a specialization of Windows 7 Compact specifically aimed at automotive applications.

A. Windows Embedded Auto 7

B. Windows Embedded Automotor 7

C. Windows Embedded Automotive 7

D. Windows Embedded Automatic 7

<Answer: C>

Topic: An Overview of Embedded Hardware

Difficulty: Difficult

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30. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ company provides Background Debug Mode (BDM) for its embedded processors.

A. Motorola

B. Nokia

C. Siemens

D. Samsung

<Answer: A>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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31. ICE means

A. in-circuit emulator

B. in-chip emulator

C. in-circuit embedder

D. integrated-circuit emulator

<Answer: A>

Topic: An Overview of Embedded Hardware

Difficulty: Difficult

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# True/False

32. Tools, such as Visual Studio, can be used for Windows Embedded 8 development without modification.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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33. Linux was unsuitable for hard real-time systems because it did not have a preemptive scheduler.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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# Multiple Choices Static

34. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is POSIX recommendation for embedded system with installable GUI, file system, and I/O systems, including PCI, SCSI, USB, serial ports, parallel ports, and Internet communications.

A. QNX

B. CNX

C. DNX

D. INX

<Answer: A>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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35. POSIX means

A. Porst Operating System Interface

B. Preventive Operating System Interface

C. Portable Operating System Integrator

D. Portable Operating System Interface

<Answer: D>

Topic: An Overview of Embedded Hardware

Difficulty: Difficult

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# Multiple Choices Static

36. Most embedded systems can be divided into three categories, based on their power requirements: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ systems.

A. Battery-operated; fixed panel; high-density

B. Battery-operated; fixed power; high-power

C. Battery-driven; fixed power; high-density

D. Battery-operated; fixed power; high-density

<Answer: D>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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37. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are distinguished from microcontrollers by their complexity and increased on-chip resources.

A. Systems on a chip

B. Systems on a drive

C. Chip on a chip

D. Device on a chip

<Answer: A>

Topic: An Overview of Embedded Hardware

Difficulty: Difficult

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# True/False

38. PLAs are slower and more costly than PALs.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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# Multiple Choices Static

39. Instead of creating a stream of binary machine code, the HDL source code produces a specification for gates and wires called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

A. netlist

B. netset

C. netlimit

D. netcode

<Answer: A>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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# True/False

40. Embedded programmers find it difficult to write global variables and unstructured code.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Easy

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41. During the system codesign phase in embedded systems, software development and virtual hardware development proceed concurrently through stepwise decomposition and refinement of the system specification.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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# Multiple Choices Static

42. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_latency is the elapsed time between the occurrence of an interrupt and the execution of the first instruction of the interrupt service routine.

A. Interrupt

B. Internal

C. Included

D. Intern

<Answer: A>

Topic: An Overview of Embedded Hardware

Difficulty: Difficult

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# True/False

43. Structured programs consist of a mainline that calls a sequence of procedures or functions, which in turn may call more procedures or functions.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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# Multiple Choices Static

44. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ interface samples signals through a serial loop connected to all signals of interest on a chip.

A. Joint Test Alter Group

B. Joint Test Active Group

C. Joint Test Activity Group

D. Joint Test Action Group

<Answer: D>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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# True/False

45. As multitasking is not required and the cost is lower, MS-DOS is used in embedded operating systems.

<Answer: True>

Topic: An Overview of Embedded Hardware

Difficulty: Medium

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