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TRUE/FALSE

1. Programs that use an interpreter generally execute faster than compiled programs because they are already entirely translated into machine language when executed.

   ANS: F

2. System software typically includes applications that people normally use most often on their computers, such as word processing programs, games, or web browsers.

   ANS: F

3. Assembly language is referred to as a high-level language because it is similar to the C++ language.

   ANS: F

4. The instruction set for a microprocessor is unique and is typically understood only by the microprocessors of the same brand.

   ANS: T

5. The CPU understands binary instructions.

   ANS: T

6. A bit that is turned off is represented by the value `-1`.

   ANS: F

7. The main reason to use secondary storage is to hold data for long periods of time, even when the power to the computer is turned off.

   ANS: T

8. RAM is volatile memory which means it cannot be erased.

   ANS: F

9. The term software refers to all the physical devices, or components, that a computer is made of.

   ANS: F

10. A syntax error does not prevent a program from being compiled and executed.

    ANS: F

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11. IDEs are specialized software packages that help programmers write programs.

    ANS: T

12. Interpreted programs always execute faster than compiled programs.

    ANS: F

MULTIPLE CHOICE

1. A(n) _____ is a program that translates a high-level language into a machine language program.

   a. compiler b. CPU c. storage device d. IDE

   ANS: A

2. A(n) _____ is a software package that usually consists of a text editor, a compiler or interpreter, and tools to test and debug programs.

   a. compiler b. CPU c. storage device d. IDE

   ANS: D

3. _____ is used to encode real numbers to store them in the computer's memory.

   a. Floating-point notation
   b. Unicode
   c. Assembly language
   d. RAM

   ANS: A

4. _____ is an extensive encoding scheme that is compatible with ASCII.

   a. Floating-point notation
   b. Unicode
   c. Assembly language
   d. RAM

   ANS: B

5. The physical devices that make up a computer are its _____.

   a. software b. applications c. hardware d. CPU

   ANS: C

6. Software refers to _____.

   a. programs
   b. physical components of a computer
   c. the CPU
   d. data stored in RAM

   ANS: A

7. Programs that make a computer useful for everyday tasks are known as _____.

   a. system software
   b. application software
   c. IDEs
   d. operating systems

   ANS: B

8. Which of the following is ***not*** an example of operating system software?

   a. Microsoft Word
   c. Linux

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b. Windows
d. Mac OS X

ANS: A

9. Which of the following is ***not*** an example of application software?

a. Microsoft Word
b. Windows
c. PowerPoint
d. a web browser

ANS: B

10. Which of the following functions does an interpreter perform with the instructions from a high-level language?

a. it translates
b. it compiles
c. it compiles and translates
d. it executes
e. it translates and executes
f. it compiles and executes

ANS: E

11. _____ is the term used for a set of rules that must be strictly followed when writing a program.

a. Semantics
b. Syntax
c. Grammar
d. Key words

ANS: B

12. The first high-level programming language that could perform complex mathematical calculations was _____.

a. COBOL
b. Ada
c. C++
d. FORTRAN

ANS: D

13. The computer language that uses mnemonics for writing programs is _____.

a. Assembly
b. Ada
c. Java
d. Pascal

ANS: A

14. The _____ cycle is used by the CPU to execute instructions in a program.

a. decode - fetch - execute
b. decode - execute - fetch
c. fetch - decode - execute
d. execute - fetch - decode

ANS: C

15. Which of the following companies does not manufacture microprocessors?

a. Intel
b. Dell
c. AMD
d. Motorola

ANS: B

16. The following is an example of an instruction written in the _____ computer language.

```
1011000 010100110
```

a. C++
b. Assembly
c. Java
d. machine language

ANS: D

17. _____ is the encoding technique used to store negative numbers in the computer's memory.

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a. Unicode
b. ASCII
c. floating-point notation
d. two's complement

ANS: D

18. _____ is the coding scheme that contains a set of 128 numeric codes which are used to represent characters in a computer's memory.

a. Unicode
b. ASCII
c. binary numbering
d. two's complement

ANS: B

19. What is the largest value that can be stored in one byte?

a. 255 b. 128 c. 8 d. 16

ANS: A

20. The smallest storage location in a computer's memory is known as a _____.

a. byte b. word c. bit d. switch

ANS: C

21. A computer system consists of all of the following ***except*** _____..

a. the CPU
b. main memory
c. the operating system
d. input and output devices

ANS: C

22. The term _____ can be used to describe anything that uses binary numbers.

a. digital
b. computer
c. mnemonic
d. processor

ANS: A

23. The statements that a programmer writes in a high-level language are called _____.

a. binary code
b. pseudocode
c. source code
d. processor code

ANS: C

24. Main memory is also called _____.

a. ROM
b. RAM
c. the hard drive
d. secondary storage

ANS: B

25. USB drives store data in a special type of memory known as _____.

a. magnetic memory
b. flash memory
c. optical server memory
d. disks

ANS: B

26. Computers can do many different jobs because they are

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a. programmable
b. reliable
c. automated
d. electronic

ANS: A

27. Application software refers to _____.

a. programs that make the computer useful to a user
b. the operating system
c. key words
d. mobile devices

ANS: A

28. What is syntax?

a. the rules that must be followed when writing a program
b. the words that have a special meaning in the programming language
c. the symbols or words that perform operations in a program
d. the words or characters that are defined by the programmer

ANS: A

29. _____ refers to the physical components that a computer is made of.

a. The device
b. Hardware
c. Software
d. The system

ANS: B

30. A computer program is _____.

a. the same as main memory
b. only used for desktop computers
c. a set of instructions that allow the computer to solve a problem or perform a task
d. another name for an operating system

ANS: C

31. A program is a sequence of instructions stored in _____.

a. the CPU
b. the computer's memory
c. software
d. the operating system

ANS: B

32. Each different type of CPU has its own _____.

a. syntax
b. high-level language
c. machine language
d. software

ANS: C

COMPLETION

1. A program cannot be translated if it has _____ errors.

ANS: syntax

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2. A _____ language allows the programmer to create very powerful and complex programs without knowing how the CPU works.

   ANS: high-level

3. A(n) _____ is used to translate Assembly language programs to machine language to be executed by the CPU.

   ANS: assembler

4. In _____ all numeric values are written as sequences of 1s and 0s.

   ANS: binary

5. The term _____ stands for a binary digit.

   ANS: bit

6. A _____ is a person with the training and skill needed to design, create, and test computer programs.

   ANS: programmer

7. Computers can do a wide variety of things because they can be _____.

   ANS: programmed

8. The _____ is the most important component of a computer because, without it, the computer could not run software.

   ANS: CPU

9. A disk drive, a USB drive, and an optical disk are all types of _____.

   ANS: secondary storage

10. Smartphones, car navigation systems, and tablets are all types of _____.

    ANS: computers

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