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Digital Planet

TOMORROW'S TECHNOLOGY AND YOU

10th EDITION

COMPLETE
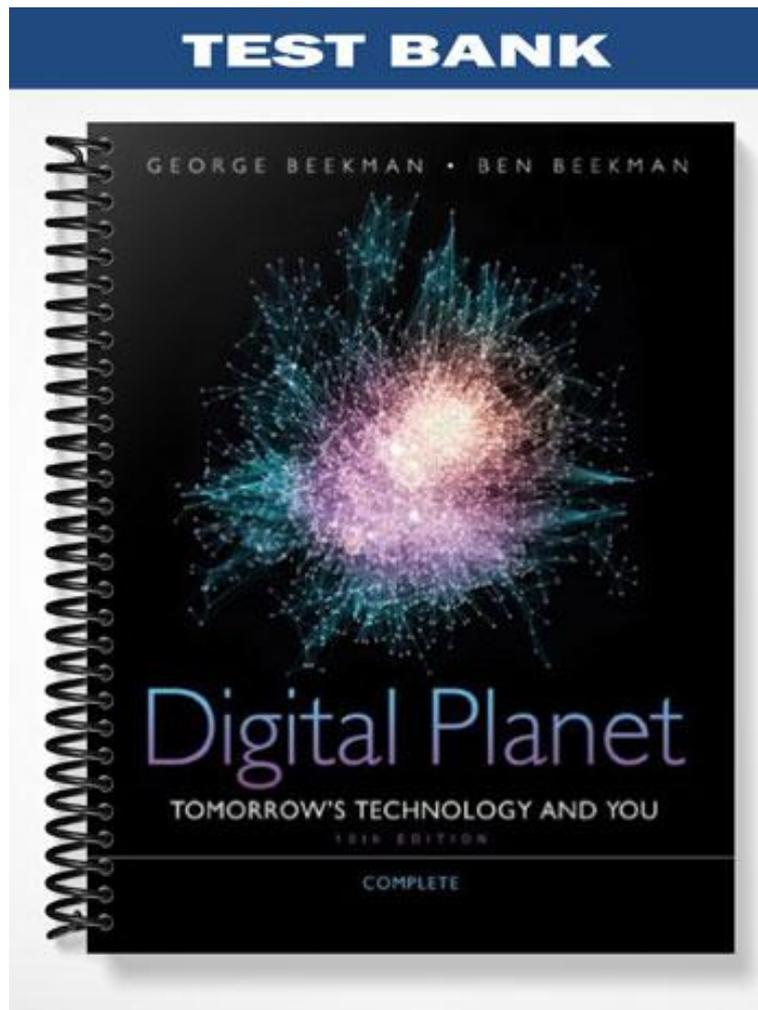
MULTIPLE CHOICE.   Choose the one alternative that best completes the statement or answers the question.

1) Processing information involves   1) _____
   A) All of these answers are forms of processing information.
   B) performing arithmetic or logical operations on information that is input.
   C) communication with another computer.
   D) accepting information from the outside world.

2) Producing output involves   2) _____
   A) communicating information to the outside world.
   B) moving and storing information.
   C) accepting information from the outside world.
   D) communication with another computer.

3) Hardware components are   3) _____
   A) impossible to add on after the initial purchase of a computer.
   B) physical parts of a computer system.
   C) fully functional without computer software.
   D) the intangible parts of a computer system.

4) The most common input devices include   4) _____
   A) monitors and mice.   B) monitors and keyboards.
   C) mice and keyboards.   D) printer and mice.

5) Which two factors are important to a casual computer user when you choose a computer?   5) _____
   A) compatibility and performance   B) monitor size and resolution
   C) compatibility and peripherals   D) speed and design

6) What character/number does ASCII binary code 0 0 1 1 0 1 1 0 translate to?   6) _____
   A) 100   B) 10   C) 6   D) 8

7) The primary output device for computers is a   7) _____
   A) keyboard.   B) printer.   C) mouse.   D) video monitor.

8) The hardware device commonly referred to as the "brain" of the computer is the   8) _____
   A) CPU.   B) RAM chip.
   C) printer.   D) secondary storage.

9) CPU stands for   9) _____
   A) central printing unit.   B) central processing unit.
   C) computer processing unit.   D) central production unit.

10) The CPU is also known as the   10) _____
   A) microprocessor.   B) microunit.
   C) primary storage.   D) random access memory.

11) The primary difference between RAM and secondary storage devices is   11) _____
   A) the type of data that is stored in them.
   B) RAM accepts input; secondary storage devices do not.
   C) RAM is permanent, and secondary storage is temporary.
   D) the length of time data is stored.

12) Primary storage is more commonly referred to as   12) _____

    A) RAM   B) ROM.   C) Digital   D) CPU

13) If a user needs information instantly available to the CPU, it should be stored   13) _____

    A) in secondary storage.   B) in the CPU.
    C) in RAM.   D) on a USB device.

14) Storage devices include all of the following EXCEPT: 14) _____

    A) a hard drive.   B) USB device.
    C) a recordable CD/DVD.   D) RAM.

15) Input, output, and storage devices are known as   15) _____

    A) peripherals.   B) firmware.
    C) hardware drivers.   D) secondary storage.

16) Information is made up of discrete, countable units called _____, so it can be subdivided.   16) _____

    A) bytes.   B) input.   C) analog units.   D) digits.

17) The smallest unit of information a computer can understand and process is known as a   17) _____

    A) byte.   B) bit.   C) digit.   D) kilobyte.

18) A bit can have two values: 18) _____

    A) 0 and 1.   B) 1 and 2.   C) 2 and 4.   D) bit and byte.

19) Binary means   19) _____

    A) there are three options; 0, 1, and 2.
    B) there are two possibilities, on and off.
    C) that computers really need to have three or more options.
    D) the same as a byte, 8 bits.

20) A group of 8 bits is known as a   20) _____

    A) kilobyte.   B) megabit.   C) byte.   D) binary digit.

21) The binary system uses the power of   21) _____

    A) 256.   B) 4.   C) 2.   D) 10.

22) A byte can represent any number between 0 and   22) _____

    A) 1,024.   B) 255.   C) 2.   D) 256.

23) The most widely used code that represents each character as a unique 8-bit code is   23) _____

    A) binary numbering system.   B) Unicode.
    C) ASCII.   D) EBCDIC.

24) ASCII stands for   24) _____

    A) American Standard Code for Information Interface.
    B) American Standard Computer Interface Internet.
    C) Advanced Standard Code for Interface Interchange.
    D) American Standard Code for Information Interchange.

25) In ASCII, _____ characters can be created.   25) _____

    A) 256   B) 1,024   C) 255   D) 128

26) An advanced coding scheme that incorporates Arabic, Chinese, Hebrew, and Japanese is known   26) _____
    as
      A) Unicode.   B) Worldcode.
      C) ASCII.   D) World Wide Interchange (WWI).

27) To represent values larger than 255, processor designers combine bytes. Two bytes, with 16 bits,   27) _____
    can represent all the numbers from 0 to _____.
      A) 256   B) 1,000,000   C) 65,535   D) 100,000

28) Approximately 1,000 megabytes is a   28) _____
      A) terabyte.   B) gigabyte.   C) petabyte.   D) kilobyte.

29) The term for the largest storage value is   29) _____
      A) terabytes.   B) kilobytes.   C) gigabytes.   D) petabytes.

30) You measure data transfer speed or memory size in   30) _____
      A) megabits.   B) kilobits.   C) terabits.   D) gigabits.

31) The motherboard is the   31) _____
      A) circuit board that houses peripheral devices.
      B) circuit board that contains a CPU and other chips.
      C) the first chip that is accessed when the computer is turned on.
      D) same as the CPU chip.

32) Backward compatibility means that   32) _____
      A) all software will work on all other computer systems.
      B) all hardware will work with other hardware.
      C) a Core i7 chip can handle processing previously done by a Core 2 Duo.
      D) a mouse will work with more advanced hardware that comes out after the date the mouse
         was produced.

33) Linux is a(n)   33) _____
      A) piece of application software.   B) operating system.
      C) type of CPU device.   D) computer system.

34) The internal clock of a computer system is the   34) _____
      A) software that shows the time on the taskbar.
      B) device that is the newest and most modern in a computer system.
      C) timing device that produces electrical pulses to synchronize the computer's operations.
      D) timing device that processes all instructions input into the computer.

35) A computer's clock speed is measured in   35) _____
      A) gigabytes.   B) bits.   C) gigahertz.   D) megahertz.

36) The word size of a typical PC's CPU is   36) _____
      A) 8 or 16 bits.   B) 1 or 2 bytes.   C) 32 or 64 bytes.   D) 32 or 64 bits.

37) _____ produced the first 64-bit processor.   37) _____
      A) Pentium   B) Microsoft   C) Apple   D) AMD

38) When two processors are employed in a computer, it is known as   38) _____
      A) multi-tasking.   B) double processing.

C) parallel processing.   D) twin processing.

39) By putting multiple CPUs on a single chip, chip makers have created   39) _____
    A) parallel processors.   B) CPU-duplicate processors.
    C) multicore processors.   D) clusters.

40) The design that determines how individual components of the CPU are put together and work   40) _____
together on the chip is called the
    A) motherboard.   B) construction.   C) architecture.   D) detailed plan.

41) The CPU's ALU contains   41) _____
    A) secondary storage space.   B) byte spaces.
    C) RAM spaces.   D) registers.

42) The part of the CPU that instructs the bus unit to read instructions stored at a certain memory   42) _____
address is known as the
    A) prefetch unit.   B) writeback.   C) decode unit.   D) bus device.

43) The Intel Core 2 processor is used in   43) _____
    A) MP3 players   B) high-end network controllers
    C) Game machines   D) PCs and servers

44) The storage area for the next likely data or instruction to be processed, preventing bottlenecks   44) _____
and slowing of the system, is known as
    A) the CPU.   B) cache.   C) RAM.   D) the register.

45) Which of the following tips help to minimize your computer's impact on the environment?   45) _____
    A) Take advantage of energy-saving features.
    B) Avoid moving parts by saving to flash drives instead of a hard drive.
    C) Use a laptop.
    D) All of the above.

46) Information stored in RAM is considered volatile, which means it is   46) _____
    A) not held permanently, only temporarily.   B) stored when the electricity is shut off.
    C) stored there permanently.   D) stored permanently in the CPU device.

47) Optical computing is sometimes called photonic computing because it uses _____ instead of   47) _____
electrons to transmit bits.
    A) light wands   B) electrons
    C) superconductors   D) photons

48) The memory that stores the computer's date, time, and calendar is the   48) _____
    A) RAM.   B) CMOS.   C) flash memory.   D) register.

49) The time for the processor to retrieve data from memory is measured in   49) _____
    A) terabytes.   B) nanoseconds.   C) milliseconds.   D) megabits.

50) RAM chips are usually grouped on small circuit boards called   50) _____
    A) DIMMs.   B) RAM boards.   C) CMOS.   D) ROM.

51) The permanently etched program that automatically begins executing the computer's   51) _____
instructions is stored in:

A) RAM.   B) CMOS.

C) ROM.   D) TRANSDUCER.

52) A special low-energy kind of RAM that can store small amounts of data for long periods of time on battery power is known as   52) _____

     A) CMOS.   B) system clock.   C) system buses.   D) CPU.

53) Expansion cards are inserted into   53) _____

     A) slots inside the computer's housing.   B) the back of the computer.

     C) peripheral devices.   D) the CPU.

54) External devices such as printers and keyboards are known as   54) _____

     A) extra hardware devices.   B) PC expansion slot add-ons.

     C) add-on devices.   D) peripherals.

55) Which of the following is NOT an output device?   55) _____

     A) speakers   B) printer   C) monitor   D) trackball

56) The four basic computer functions are   56) _____

     A) receive input, process information, produce output, and store information.

     B) receive the kernel, process information, produce output, and store CMOS.

     C) receive input, process information, produce terabytes, and store information.

     D) gather data, access memory, print, and store information.

57) The following are considered basic components of a computer: 57) _____

     A) input devices, output devices, processors, memory, and storage devices.

     B) analog and digital signals.

     C) bits and bytes.

     D) motherboard, circuits, ports.

58) Given that the presence of an electrical charge is a positive and the absence of an electrical charge is a negative, this is an example of   58) _____

     A) information overload.   B) hexadecimal code.

     C) a binary choice.   D) digital.

59) This is used to represent one character on a computer: 59) _____

     A) digit.   B) byte.   C) bit.   D) kilobyte.

60) A logical group of 8 bits is also known as a(an)   60) _____

     A) hexadecimal code.   B) unique.

     C) octet.   D) port.

61) For computers, adding binary numbers is simpler than adding decimal numbers because   61) _____

     A) you must have a calculator to do it.

     B) all numeric values can be represented in two digits.

     C) there are fewer rules to remember.

     D) binary numbers are longer.

62) Program instructions are represented in binary notation through the use of   62) _____

     A) buzzwords.   B) codes.   C) sets.   D) pacts.

63) ASCII is a subset of this larger coding scheme: 63) _____

A) EBCDIC.   B) lingo.   C) Unicode.   D) ASCII 2..

64) The following term could be used to quantify the size of a computer file: 64) _____

     A) RAM.   B) Megabyte.   C) CMOS.   D) ROM.

65) An Mbit is equal to   65) _____

     A) one million bits.   B) one million petabytes.

     C) one million bytes.   D) 8 megabytes.

66) This type of computer uses less energy than a desktop computer: 66) _____

     A) mainframe.   B) Blu-ray.   C) notebook.   D) supercomputer
.

67) To save energy you can set your laptop computer to go to   67) _____

     A) death mode.   B) sleep.

     C) garbage collection mode.   D) overclock mode.

68) The circuit board that contains a computer's CPU is called the   68) _____

     A) motherboard.   B) daughter board.

     C) wafer.   D) memory chip.

69) When newer processors can process all of the instructions handled by earlier models, the   69) _____
processor is considered

     A) Core 2 Duo.   B) Motorola.

     C) Apple.   D) backward compatible.

70) A computer's overall performance is determined by   70) _____

     A) clock speed, architecture, and wordsize.   B) peripheral and internal devices.

     C) Level 1 and Level 2 cache.   D) CMOS and cache memory.

71) Increasing the clock speed of CPUs creates a negative side effect of   71) _____

     A) slower performance.   B) loss of digits.

     C) heat.   D) incompatibility.

72) One billion clock cycles per second is   72) _____

     A) megahertz.   B) gigahertz.   C) Mbits.   D) hertz.

73) Putting multiple CPUs on a single chip is defined as   73) _____

     A) clustering.   B) a multicore processor.

     C) heat sinking.   D) multitasking.

74) To speed up processing, CPUs obtain data that is likely to be used next from   74) _____

     A) cache.   B) CMOS.   C) USB port.   D) hard drive.

75) This type of memory is located in the CPU and is used to store data that is likely to be used next: 75) _____

     A) virtual storage.   B) Level 2 cache.   C) flash memory.   D) Level 1 cache.

76) The CPU and main memory are housed in _____ chips on the motherboard and other circuit   76) _____
boards inside the computer.

     A) silicon   B) storage   C) plastic   D) peripheral

77) The typical CPU is divided into these functional units: 77) _____

A) presort, sort, process, export, and save.
B) control, arithmetic logic, decode, bus, and prefetch.
C) registers, prefetch, decode, and store.
D) fetch, decode, execute, and shred.

78) The actual execution of instructions is usually carried out by the   78) _____
    A) prefetch unit.   B) arithmetic logic unit.
    C) decode unit.   D) control unit.

79) This unit of the CPU translates instructions for the CPU processing: 79) _____
    A) decode unit.   B) prefetch unit.
    C) ALU.   D) Bus Interface Unit.

80) When information is sent from the CPU to memory or some other device this is considered   80) _____
    A) writeback.   B) communication.
    C) garbage collection.   D) backflow.

81) This is an open area in the system unit used to hold a disk drive: 81) _____
    A) port.   B) sack.   C) transducer.   D) bay.

82) Information travels between components on the motherboard through _____.   82) _____
    A) buses   B) microprocessors
    C) chips   D) transistors

83) CMOS stands for   83) _____
    A) conducting memory of systems.
    B) computer mouse operating system.
    C) cost per minute of semiconductor.
    D) complementary metal-oxide semiconductor.

TRUE/FALSE.   Write 'T' if the statement is true and 'F' if the statement is false.

84) Ron White, in *How Computers Work*, states that "The microprocessor that makes up your personal   84) _____
computer's central processing unit, or CPU, is the ultimate computer brain, messenger,
ringmaster, and boss."

85) ALU stands for arithmetic logistical unit.   85) _____

86) Storage devices serve as short-term repositories for data.   86) _____

87) To make words, sentences, and paragraphs fit into the computer's binary only circuitry,   87) _____
programmers have devised codes that represent each letter, digit, and special character as a
unique string of bits.

88) Not all software is compatible with every CPU.   88) _____

89) Screen savers do not save energy or money.   89) _____

90) A file is an organized collection of information, such as a term paper or a set of names and   90) _____
addresses, stored in a computer-readable form.

91) The operating system is loaded from the hard disk onto ROM when the computer is starting up.   91) _____

92) A computer doesn't understand words, numbers, pictures, musical notes, or even letters   92) _____
of the alphabet.

93) Flash memory chips, like RAM chips, can be written and erased rapidly and repeatedly.   93) _____

SHORT ANSWER.   Write the word or phrase that best completes each statement or answers the question.

94) The most common input devices include a keyboard and mouse.   One less common   94) _____
input device tat requires voice use is a _____.

95) A computer's overall performance is determined in part by the speed of its   95) _____
microprocessor's
internal _____.

96) The typical CPU is divided into several functional units: control, arithmetic logic,   96) _____
decode, _____, and prefetch.

97) The physical components of a computer system are known as _____.   97) _____

98) A printer and a monitor are the most common _____ devices.   98) _____

99) Removable media devices are examples of secondary storage, otherwise known as   99) _____
_____ storage.

100) The _____ was the first smart phone to truly capture the imagination of consumers   100) _____
and software developers.

101) Windows and Mac OS X systems have advanced energy-saver control panels that can be   101) _____
used to switch the monitor, hard drive, and CPU to lower-power _____ modes
automatically after specified periods of inactivity.

102) A computer system is not complete without _____, which tells the hardware what to   102) _____
do.

103) A(n) _____ is a binary digit.   103) _____

104) Programs written for _____, a popular operating system cannot run on Windows.   104) _____

105) Eight bits are called an octet or a _____.   105) _____

106) The most widely used code for computer programming is _____ (an abbreviation)   106) _____
and represents each character as a unique 8-bit code.

107) The abbreviation, TB, stands for _____ when referring to computer storage.   107) _____

108) Data transfer speed is measured in _____, or Mb, per second.   108) _____

109) The CPU, all additional chips, and the electronic circuitry are all housed on the   109) _____
_____.

110) Gigahertz is a measure of the computer's clock speed and is a measure of _____ of   110) _____
clock cycles per second.

111) The number of bits a CPU can process simultaneously is the CPU's _____ size.

111) _____

112) Computer memory or primary memory is also known by the acronym _____.

112) _____

113) _____ memory is nonvolatile and often used in digital cameras and cell phones.

113) _____

114) In modern integrated circuits, high and low electrical charges represent bits, but these circuits work as if they were really made up of tiny _____.

114) _____

115) The wire groups that transfer data between components on the motherboard are known as the _____ buses.

115) _____

116) Slots and _____ enable the CPU to communicate with the outside world via peripheral devices.

116) _____

117) The microprocessor, also known by the acronym _____ is considered the "brain" of the computer.

117) _____

118) Information on computers is _____, which means it can be made up of two values.

118) _____

119) The _____ number system is a system that denotes all numbers with combinations of two digits.

119) _____

120) _____ is a coding scheme that supports 100,000 unique characters—more than enough for all major world languages.

120) _____

121) A _____ CPU can (with the right software) divide the work load between processors, assigning multiple cores to labor-intensive tasks such as photo or video editing.

121) _____

122) A _____, also known as a PB, is the astronomical value that is equivalent to 1,024 terabytes, or 1 quadrillion bytes.

122) _____

123) When computer software developed for one processor does not work on another processor, it is not _____.

123) _____

124) Think of memory as millions of tiny storage _____, each of which can contain a single byte of information.

124) _____

125) _____ Corp. is responsible for manufacturing the Pentium family of processors.

125) _____

126) Computers store important start-up information on chips that are commonly known by the acronym _____.

126) _____

127) The time it takes a processor to retrieve data from memory is called _____ time.

127) _____

128) The access time for most memory is measured in _____ (billionths of a second).

128) _____

129) Computer users can customize their computers by inserting special-purpose circuit boards called _____ cards.

129) _____

MATCHING. Choose the item in column 2 that best matches each item in column 1.

Match the term on the left to its corresponding definition on the right.

130) bus

131) bay

132) expansion card

133) port

134) peripheral

135) RAM

136) CMOS

137) DIMMs

138) ROM

139) flash memory

140) instructions

A) memory chips on small circuit boards

B) printer, scanner, or mouse, for example

C) area in the computer box for disk drives or other devices

D) low-energy, battery powered memory

E) adds an additional feature to a computer system

F) unchangeable information that serves as reference material for the CPU

G) socket on the outside of the computer

H) wires that move data from one component to another

I) contained on the CPU to perform a variety of simple tasks

J) similar to RAM but nonvolatile

K) temporary storage area

130) _____

131) _____

132) _____

133) _____

134) _____

135) _____

136) _____

137) _____

138) _____

139) _____

140) _____

Match the term on the left to its corresponding definition on the right.

141) ALU

142) register

143) writeback

144) cache

145) decode unit

146) clock

A) translates an instruction into a form suitable for the CPU's internal processing

B) the final phase of execution for a CPU

C) 32 or 64 bit storage for the ALU

D) part of the CPU where instructions are performed

E) timing device

F) memory that is faster than RAM

141) _____

142) _____

143) _____

144) _____

145) _____

146) _____

1) B
2) A
3) B
4) C
5) A
6) C
7) D
8) A
9) B
10) A
11) D
12) A
13) C
14) D
15) A
16) D
17) B
18) A
19) B
20) C
21) C
22) B
23) C
24) D
25) A
26) A
27) C
28) B
29) D
30) A
31) B
32) C
33) B
34) C
35) C
36) D
37) D
38) C
39) C
40) C
41) D
42) A
43) D
44) B
45) D
46) A
47) D
48) B
49) B
50) A
51) C

52) A
53) A
54) D
55) D
56) A
57) A
58) C
59) B
60) C
61) C
62) B
63) C
64) B
65) A
66) C
67) B
68) A
69) D
70) A
71) C
72) B
73) B
74) A
75) B
76) A
77) B
78) B
79) A
80) A
81) D
82) A
83) D
84) TRUE
85) FALSE
86) FALSE
87) TRUE
88) TRUE
89) TRUE
90) TRUE
91) FALSE
92) TRUE
93) TRUE
94) microphone
95) clock
96) bus
97) hardware
98) output
99) permanent
100) iPhone
101) power sleep
102) software
103) bit

104) Linux
105) byte
106) ASCII
107) terabyte
108) megabits
109) motherboard
110) billions
111) word
112) RAM
113) Flash
114) switches
115) internal
116) ports
117) CPU
118) binary
119) binary
120) Unicode
121) multicore
122) petabyte
123) compatible
124) cells
125) Intel
126) ROM
127) access
128) nanoseconds
129) expansion
130) H
131) C
132) E
133) G
134) B
135) K
136) D
137) A
138) F
139) J
140) I
141) D
142) C
143) B
144) F
145) A
146) E