

1. Which number represents the value of the base in every number system?

- A. 0
- B. 1
- C. 10
- D. 11
- E. 100

Answer Key: **C**

2. What is the largest digit in the octal number system?

- A. 1
- B. 2
- C. 7
- D. 8
- E. 9

Answer Key: **C**

3. Which of the following describes the number 0 and any number that can be obtained by repeatedly adding one to it?

- A. number
- B. natural number
- C. integer
- D. negative number
- E. rational number

Answer Key: **B**

4. How many digits are there in the octal number system?

- A. 1
- B. 2
- C. 7
- D. 8
- E. 9

Answer Key: **D**

5. What is a group of eight binary digits called?

- A. byte
- B. nibble
- C. bit
- D. word
- E. block

Answer Key: **A**

6. Which of the following is an integer or the quotient of two integers (excluding division by zero)?

- A. number
- B. natural number
- C. integer
- D. negative number
- E. rational number

Answer Key: **E**

7. Which unit of binary storage has a size that is processor-dependent?

- A. byte
- B. nibble
- C. bit
- D. word
- E. block

Answer Key: **D**

8. Which of the following is a value less than zero, with a sign opposite to its positive counterpart?

- A. number
- B. natural number
- C. integer
- D. negative number
- E. rational number

Answer Key: **D**

9. Which of the following can be used to express the value of every number in any number system?

- A. base
- B. quotient
- C. polynomial
- D. rational number
- E. radix

Answer Key: **C**

10. What is a single binary digit called?

- A. byte
- B. nibble
- C. bit
- D. word
- E. block

Answer Key: **C**

11. True or False? The base of a number system determines the number of digits used in the system.

A. True

B. False
Answer Key: **True**

12. How many digits are there in the binary number system?

- A. 1
- B. 2
- C. 7
- D. 8

E.
9

Answer Key: **B**

13. What is the lowest base in which the number 987 could be a valid number?

- A. binary
- B. base 3
- C. octal
- D. decimal
- E.
hexadecimal

Answer Key: **D**

14. True or False? Starting from the right, every group of four binary digits can be read as one hexadecimal digit.

- A. True
- B. False

Answer Key: **True**

15. True or False? There is one set of underlying principles governing all numbers systems.

- A. True

B. False Answer Key: **True**

16. True or False? Representing a # in base 5 sometimes requires more digits than representing that same number in base 10.

- A. True

B. False Answer Key: **True**

17. Which of the following describes a natural number, the negative of a natural number, or zero?

- A. number
- B. imaginary number
- C. integer
- D. negative number
- E. rational number

Answer Key: **C**

18. In base 16, the digit E corresponds to what decimal value?

- A. 1
- B. 10
- C. 12
- D. 14
- E. 15

Answer Key: **D**

19. How many digits are there in the hexadecimal number system?

- A. 0
- B. 9
- C. 10
- D. 15
- E. 16

Answer Key: **E**

20. What is the decimal value of the largest digit in the hexadecimal number system?

- A. 0
- B. 9
- C. 10
- D. 15
- E. 16

Answer Key: **D**

21. What is the largest digit in the binary number system?

- B.
2
- C.
7
- D.
8
- E.
9

Answer Key: **A**

22. True or False? Two hexadecimal digits can be stored in one byte.
A. True

B. False Answer Key: **True**

23. Which of the following is true about vector graphics?

- A. they represent real-world images very well
- B. they do not represent every pixel individually
- C. JPEG is a vector graphics format
- D. GIF is a vector graphics format
- E. they rely on spatial compression

Answer Key: **B**

24. Which text compression technique replaces a frequently used word with a single character?

- A. run-length encoding
- B. character set encoding
- C. keyword encoding
- D. Huffman encoding
- E. ASCII encoding

Answer Key: **C**

25. Which text compression technique replaces a long series of repeated characters with a count of the repetition?

- A. run-length encoding
- B. character set encoding
- C. keyword encoding
- D. Huffman encoding
- E. ASCII encoding

Answer Key: **A**

26. True or False? A character set is a list of characters and their numeric codes.
A. True

B. False Answer Key: **True**

27. Which audio format is the most popular today?

- A. WAV
- B. AU
- C. AIFF
- D. VQF
- E. MP3

Answer Key: **E**

28. Which of the following is true about representing color as an RGB value?

- A. it mimics the way color is perceived by the human eye
- B. it cannot represent the color black
- C. it cannot represent the color white
- D. it cannot represent transparency
- E. it is composed of four separate numbers

Answer Key: **A**

29. True or False? A compact disk (CD) stores audio information as an analog signal.

A. True

B. False Answer Key: **False**

30. Which technique for representing numeric data has two forms of zero?

- A. signed-magnitude
- B. fixed-sized numbers
- C. floating point
- D. ten's complement
- E. scientific notation

Answer Key: **A**

31. Which technique for representing numeric data uses the mantissa to hold the significant digits of a value?

- A. signed-magnitude
- B. fixed-sized numbers
- C. floating point
- D. ten's complement
- E. scientific notation

Answer Key: **C**

32. What is the primary reason for compressing data?

- A. expensive storage devices
- B. limited size of storage devices
- C. limited network bandwidth
- D. limited online availability of crucial data
- E. expensive transfer rates for auxiliary memory

Answer Key: **C**

33. What causes numeric overflow?

- A. using fixed-sized numbers in a floating point calculation
- B. a calculation producing an invalid result
- C. a calculation producing a value that won't fit into the allotted space
- D. using a radix point instead of a decimal point
- E. using a radix point in a fixed-sized number calculation

Answer Key: **C**

34. True or False? Electronic signals are easier to manage if they transfer only binary data.

A. True

B. FalseAnswer Key: **True**

35. How many things can be represented using two bits?

- A.
2
- B.
4
- C.
6
- D.
8
- E.
10

Answer Key: **B**

36. True or False? Information is data that has been organized and/or processed in a useful way.

A. True

B. FalseAnswer Key: **True**

37. Which text compression technique uses variable-length binary strings to represent characters, assigning frequently used characters short codes?

- A. run-length encoding
- B. character set encoding
- C. keyword encoding
- D. Huffman encoding
- E. ASCII encoding

Answer Key: **D**

38. Recording the voltage level of an audio signal at regular intervals is called what?

- A. sampling

- B. peak analysis
- C. pulse-code modulation
- D. MP3 analysis
- E. CD simulation

Answer Key: **A**

39. Which of the following characters are not represented in the ASCII character set?

- A. uppercase letters (A-Z)
- B. lowercase letters (a-z)
- C. punctuation such as a period or comma
- D. Cyrillic characters
- E. non-printable characters such as ESC (escape) and DEL (delete)

Answer Key: **D**

40. True or False? Analog data is a continuous representation of the information it represents.

A. True

B. False Answer Key: **True**

41. True or False? Bandwidth is the term that describes the size of the wires connecting two computers in a network.

A. True

B. False Answer Key: **False**

42. Which gate produces a 0 only if all its inputs are 0 and a 1 otherwise?

- A. AND
- B. NAND
- C. XOR
- D. OR
- E. NOR
- F. NOT

Answer Key: D

43. Which gate produces a 1 only if all its inputs are 1 and a 0 otherwise?

- A. AND
- B. NAND
- C. XOR
- D. OR
- E. NOR
- F. NOT

Answer Key: A

44. Which gate does the following Boolean expression represent? $X = A + B$

- A. AND
- B. NAND
- C. XOR
- D. OR
- E. NOR
- F. NOT

Answer Key: D

45. Which gate does the following Boolean expression represent? $X = A \cdot B$

- A. AND
- B. NAND
- C. XOR
- D. OR
- E. NOR
- F. NOT

Answer Key: A

46. Which gate produces a 0 if all its inputs are 1 and a 1 otherwise?

- A. AND
- B. NAND
- C. XOR
- D. OR
- E. NOR
- F. NOT

Answer Key: **B**

47. True or False? A circuit is a combination of gates designed to accomplish a more complex logical function.

A. True

B. False
Answer Key: **True**

48. A transistor is made up of what kind of material?

- A. semiconductor
- B. conductor
- C. insulation
- D. rubber
- E. copper

Answer Key: **A**

49. Which gate does the following Boolean expression represent? $X = A'$
- A. AND
 - B. NAND
 - C. XOR
 - D. OR
 - E. NOR
 - F. NOT

Answer Key: **F**

50. A transistor acts like which of the following?
- A. a light
 - B. a button
 - C. a switch
 - D. a frame
 - E. a memory location

Answer Key: **C**

51. Which gate inverts its input?
- A. AND
 - B. NAND
 - C. XOR
 - D. OR
 - E. NOR
 - F. NOT

Answer Key: **F**

52. The following equation is an example of which Boolean algebra property? $AB = BA$
- A. commutative
 - B. associative
 - C. distributive
 - D. identity
 - E. compliment
 - F. DeMorgan's law

Answer Key: **A**

53. True or False? The OR and XOR gates produce different outputs in only one case.
- A. True

B. False Answer Key: **True**

54. Under what circumstances are two circuits considered equivalent?

- A. their input values are the same
- B. the output of one is the inverse of the output of the other
- C. their output values are the same for all possible input combinations
- D. their output values are always 1
- E. the input of one matches the output of the other

Answer Key: **B**

55. Which of the following lists all possible input combinations for a gate, and the corresponding output?

- A. truth table
- B. Boolean expression
- C. logic diagram
- D. circuit
- E. S-R latch

Answer Key: **A**

56. Which gate produces a 0 only if all its inputs are the same and a 1 otherwise?

- A. AND
- B. NAND
- C. XOR
- D. OR
- E. NOR
- F. NOT

Answer Key: **C**

57. Which gate produces a 1 if all its inputs are 0 and a 0 otherwise?

- A. AND
- B. NAND
- C. XOR
- D. OR
- E. NOR
- F. NOT

Answer Key: **E**

58. True or False? A NAND gate and a AND gate produce opposite output.

A. True

B. False
Answer Key: **True**

59. The following equation is an example of which Boolean algebra property? $(AB)C = A(BC)$

- A. commutative
- B. associative
- C. distributive
- D. identity
- E. compliment
- F. DeMorgan's law

Answer Key: **B**

60. How many possible input combinations exist for an OR gate with three inputs?

- A. 2
- B. 4
- C. 8
- D. 16

E.
32

Answer Key: **C**

61. True or False? Boolean algebra allows us to apply provable mathematical principles to the design of circuits.
A. True

B. False Answer Key: **True**

62. True or False? A gate is constructed of one or more transistors.
A. True

B. False Answer Key: **True**

63. Which gate does the following Boolean expression represent? $X = (A + B)'$

A. AND

B.
NAND

C. XOR

D. OR

E. NOR

F. NOT

Answer Key: **E**

64. If the input to a transistor (its base signal) is low, what is its output?

- A. binary
0
- B. binary
1
- C. 0 volts
- D. 15
volts
- E. ground

Answer Key: **B**

65. Which gate does the following Boolean expression represent? $X = (A \cdot B)'$

- A. AND
- B. NAND
- C. XOR
- D. OR
- E. NOR
- F. NOT

Answer Key: **B**

66. Which of the following is a device that performs a basic operation on electrical signals?

- A. logic
symbol
- B. truth table
- C. gate
- D. circuit
- E. S-R latch

Answer Key: **C**

67. The central processing unit of a computer is which of the following?

- A. gate
- B. stand-alone
circuit
- C. integrated circuit
- D. S-R latch
- E. multiplexer
- F. full adder

Answer Key: **C**

68. True or False? If an electrical signal is grounded, the electricity literally flows harmlessly to the ground.

- A. True

B. FalseAnswer Key: **True**

69. True or False? The CPU determines what additional data may be needed to execute an instruction.
A. True

B. FalseAnswer Key: **True**

70. True or False? Both RAM and ROM are random-access devices.
A. True

B. FalseAnswer Key: **True**

71. True or False? A volatile storage device loses its memory if its power supply is turned off.
A. True

B. FalseAnswer Key: **True**

72. True or False? The fetch part of the fetch-execute cycle fetches the next instruction to be executed from memory.
A. True

B. FalseAnswer Key: **True**

73. Which of the following is volatile?

- A. control unit
- B. arithmetic/logic unit
- C. auxiliary storage device
- D. RAM
- E. ROM

Answer Key: **D**

74. True or False? Pipelining is a technique that uses several different processors, where each contributes one part to an overall computation.

A. True

B. False Answer Key: **True**

75. The program counter is used to store which of the following?

- A. an instruction
- B. the memory location of an instruction
- C. the number of program instructions executed
- D. the number of programs executed
- E. the data used by an instruction

Answer Key: **B**

76. Addressability refers to which of the following?

- A. the number of bits stored in each addressable location
- B. the size of each addressable location
- C. the size of a memory address
- D. the capacity of a memory device
- E. the number of bytes currently holding data in a memory device

Answer Key: **A**

77. Which parallel-processing approach applies the same program to multiple data sets using multiple processors?

- A. synchronous processing
- B. tandem processing
- C. pipelining processing
- D. transfer processing
- E. decode processing

Answer Key: **A**

78. Which of the following means that each memory location can be accessed by its address?

- B. Pentium 4
- C. random access
- D. cycles per second
- E. modem

Answer Key: **C**

79. Which of the following manages the fetch-execute cycle?

- A. control unit
- B. arithmetic/logic unit
- C. auxiliary storage device
- D. RAM
- E. ROM

Answer Key: **A**

80. True or False? The control unit and the arithmetic/logic unit are both part of the central processing unit (CPU).

A. True

B. False
Answer Key: **True**

81. True or False? A megabyte of memory space is larger than a gigabyte of memory space.
A. True

B. False Answer Key: **False**

82. Which of the following is a unit of frequency?

- A. Hertz
- B. Pentium 4
- C. random access
- D. cycles per second
- E. modem

Answer Key: **A**

83. True or False? The data on a CD-RW can be rewritten multiple times.
A. True

B. False Answer Key: **True**

84. True or False? A touch screen is both an input and output device.
A. True

B. False Answer Key: **True**

85. The prefix *giga* refers to which power of two?

- A.
 2×10^{10}
- B.
 2×10^{20}
- C.
 2×10^{30}
- D.
 2×10^{40}
- E.
 2×10^{50}

Answer Key: **C**

86. Which of the following contains the program counter?

- A. control unit
- B. arithmetic/logic unit
- C. auxiliary storage device
- D. RAM
- E. ROM

Answer Key: **A**

87. Which of the following is referred to as the computer's bus?

- A. the device used to transfer data from auxiliary storage
- B. the storage location for the currently executing program

- C. the set of wires through which data travels among the core devices
- D. the storage location for the current instruction
- E. the number of bytes transferred from RAM to ROM

Answer Key: **C**

88. The instruction register is used to store which of the following?

- A. an instruction
- B. the memory location of an instruction
- C. the number of program instructions executed
- D. the number of programs executed
- E. the data used by an instruction

Answer Key: **A**

89. Which of the following is the time it takes for the read/write head of a disk drive to get into position over a specified track?

- A. seek time
- B. latency
- C. transfer rate
- D. spindle time
- E. access time

Answer Key: **A**

90. True or False? A compact disc stores data using magnetized particles.
A. True

B. False Answer Key: **False**

91. True or False? The control unit manages the fetch-execute cycle.
A. True

B. False Answer Key: **True**

92. Which of the following is the time it takes for the specified sector to rotate to the read/write head of a disk drive?

- A. seek time
- B. latency
- C. transfer rate
- D. spindle time
- E. access time

Answer Key: **B**

93. Which of the following contains the instruction register?

- A. control unit
- B. arithmetic/logic unit
- C. auxiliary storage device
- D. RAM
- E. ROM

Answer Key: **A**

94. Which of the following executes an instruction once it is decoded?

- A. control unit
- B. arithmetic/logic unit
- C. auxiliary storage device
- D. RAM
- E. ROM

Answer Key: **B**

95. Which of the following best describes a register?

- A. a memory location which stores a sum
- B. a device that contains the arithmetic/logic unit
- C. a device that contains the control unit
- D. a large memory location in auxiliary storage

E. a small memory location in the central processing unit

Answer Key: **E**

96. Which of the following is a device that allows a computer to connect to the Internet?

- A. Hertz
- B. Pentium 4
- C. random access
- D. cycles per second
- E. modem

Answer Key: **E**

97. Which Pep/7 addressing mode indicates that the operand contains data rather than the location of data?

- A. accumulator
- B. direct
- C. immediate
- D. virtual
- E. status

Answer Key: **C**

98. True or False? Assembly language is an abstraction, hiding some of the details that occur at the machine language level.
A. True
B. FalseAnswer Key: **True**

99. True or False? Assembly language allows program instructions to be specified using mnemonics that correspond to machine language instructions.
A. True
B. FalseAnswer Key: **True**

100. True or False? Machine language is the set of binary-coded instructions that are executed directly by a computer.
A. True
B. FalseAnswer Key: **True**

101. Which language uses mnemonics to represent instructions?

- A. high-level language
- B. assembly language
- C. machine language
- D. virtual language
- E. accumulator language

Answer Key: **B**

102. Which of the following best describes a virtual computer?

- A. a hypothetical computer with unlimited memory
- B. a hypothetical computer with an unlimited instruction set
- C. a hypothetical computer used to illustrate the features of a real machine
- D. a programmed simulator for a real CPU like a Pentium 4
- E. a programmed simulator of multiple CPUs

Answer Key: **C**

103. Which of the following is not an operation that can be performed by a Pep/7 machine instruction?

- A. stop execution
- B. load the operand into the accumulator
- C. store the contents of the accumulator into the operand
- D. add the contents of the program counter to the accumulator
- E. read character input and store into the operand

Answer Key: **D**

104. True or False? A comment in a program is explanatory text for the human reader.
A. True
B. FalseAnswer Key: **True**

105. Which part of the Pep/7 instruction specifier indicates which instruction is to be carried out?

- B. register specifier
- C. addressing mode specifier
- D. status bit
- E. accumulator

Answer Key: **A**

106. Which Pep/7 addressing mode indicates that the operand contains the location of data rather than the data itself?

- A. accumulator
- B. direct
- C. immediate
- D. virtual
- E. status

Answer Key: **B**

107. True or False? An assembler ignores comments.
A. True

B. False Answer Key: **True**

108. Which part of the Pep/7 instruction specifier indicates how the operand should be interpreted?

- A. operation code
- B. register specifier
- C. addressing mode specifier
- D. status bit
- E. accumulator

Answer Key: **C**

109. Which of the following is not a valid mnemonic in the Pep/7 assembly language?

- A. STOP
- B. LOADA
- C. ADDA
- D. STOREA
- E. REPEAT

Answer Key: **E**

110. Which language is actually executed by the central processing unit of a computer?

- A. high-level language
- B. assembly language
- C. machine language
- D. virtual language
- E. accumulator language

Answer Key: **C**

111. True or False? The Pep/7 machine is a virtual computer.
A. True

B. False Answer Key: **True**

112. True or False? The loader is software that puts a machine-language program into memory so that it can be executed.
A. True

B. False Answer Key: **True**

113. Which register holds the results of operations?

- A. program counter

- B. instruction register
- C. index register
- D. accumulator
- E. status register

Answer Key: **D**

114. Which of the following is true about clear-box testing?

- A. the test cases are based on the code
- B. the test cases are based on the input
- C. the test cases are based on the output
- D. the testing is performed by dedicated testers
- E. the testing is performed each time the program changes

Answer Key: **A**

115. True or False? The Pep/7 machine language includes an instruction to stop the execution of a program.

A. True

116. B. FalseAnswer Key: **True**

True or False? The code-coverage testing approach eliminates the need to test some of the code by covering it with a theoretical "black box."

A. True

B. False Answer Key: **False**

117. True or False? The data-coverage testing approach tests the limits of the program's data.

A. True

B. False Answer Key: **True**

118. True or False? Very few programs are written in machine language today.

A. True

B. False Answer Key: **True**

119. True or False? A test plan is a document that specifies how a program is to be tested.

A. True

B. False Answer Key: **True**

120. Which of the following describes a monitor and keyboard used to interact with a computer?

A. batch

B. operator

C. job

D. dumb
terminal

E. mainframe

Answer Key: **D**

121. Which of the following describes a degradation of system performance because too many pages are moving to and from memory?

A. swapping

B. context
switch

C. demand
paging

D. thrashing

E. virtual
memory

Answer Key: **D**

122. True or False? In early computer systems, user jobs were organized into batches with similar characteristics or needs.

A. True

B. False Answer Key: **True**

123. Which of the following describes a memory management technique in which a program is divided into fixed sized sections and stored into areas of memory called frames?

A. single
contiguous

B. logical address

C. physical address

D. round robin

E. paged

Answer Key: **E**

124. Which of the following best describes a partitioning approach in which a new partition is created to accommodate a new process?

A. dynamic partitions

B. fixed partitions

C. both A and B

D. neither A or B

Answer Key: **A**

125. Which of the following is a technique for keeping more than one process in memory at the same time?

- A. process management
- B. memory management
- C. multiprogramming
- D. timesharing
- E. CPU scheduling

Answer Key: **C**

126. Which of the following describes a program and its related system instructions?

- A. batch
- B. operator
- C. job
- D. dumb terminal
- E. mainframe

Answer Key: **C**

127. True or False? An operating system is the core part of the system software of a computer.

A. True

B. False Answer Key: **True**

128. Which of the following describes a reference made by a program relative to itself?

- A. single contiguous
- B. logical address
- C. physical address
- D. partition
- E. paged

Answer Key: **B**

129. Which of the following describes a partition selection algorithm in which the program is allocated to the largest partition big enough to hold it?

- A. best fit
- B. worst fit
- C. shortest fit
- D. first fit
- E. last fit

Answer Key: **B**

130. In which state does a process reside if it does not have a needed resource, such as a page from secondary memory?

- A. ready
- B. new
- C. waiting
- D. terminated
- E. running

Answer Key: **C**

131. Which of the following describes a partition selection algorithm in which the program is allocated to the first partition big enough to hold it?

- A. best fit
- B. worst fit
- C. shortest fit
- D. first fit
- E. last fit

Answer Key: **D**

132. True or False? Application software is written to solve problems in the real world.

A. True

B. False
Answer Key: **True**

133. Which of the following determines which process is allocated to the CPU?

- A. process management
- B. memory management
- C. multiprogramming
- D. timesharing
- E. CPU scheduling

Answer Key: **E**

134. Which of the following is a CPU scheduling algorithm that allocates processes to the CPU in the order in which they arrive?

- A. shortest-job-next
- B. first-come, first-served
- C. time slice
- D. round robin
- E. turnaround time

Answer Key: **B**

135. True or False? An operating system manages processes, which are programs currently being executed.

A. True

B. False
Answer Key: **True**

136. Which of the following is a CPU scheduling algorithm that gives priority to the process with the smallest estimated remaining run time?

- A. shortest-job-next
- B. first-come, first-served
- C. time slice
- D. round robin
- E. turnaround time

Answer Key: **A**

137. Which of the following describes a memory management technique in which main memory is divided into multiple, different sized sections?

- A. single contiguous
- B. logical address
- C. physical address
- D. partition
- E. paged

Answer Key: **D**

138. Which of the following describes the human controller that used to manage computer usage?

- A. batch

- B. operator
- C. job
- D. dumb terminal
- E. mainframe

Answer Key: **B**

139. Which of the following shares CPU time among multiple processes to create the illusion that each user has a dedicated machine?

- A. process management
- B. memory management
- C. multiprogramming
- D. timesharing
- E. CPU scheduling

Answer Key: **D**

140. Which of the following describes a computer that multiple users would access at the same time?

- A. batch
- B. operator
- C. job
- D. dumb terminal
- E. mainframe

Answer Key: **E**

141. Which of the following describes a collection of similar programs processed at the same time?

- A. batch
- B. operator
- C. job
- D. dumb terminal
- E. mainframe

Answer Key: **A**

142. True or False? The CPU can be executing only one program at any instance in time.

A. True

B. False Answer Key: **True**

143. True or False? Response time is the delay between receiving a stimulus and responding to it.

A. True

B. False Answer Key: **True**

144. Which of the following describes a memory management technique in which only one application program was loaded into memory?

- A. single contiguous
- B. logical address
- C. physical address
- D. partition
- E. paged

Answer Key: **A**

145. Which of the following describes a memory management technique in which all parts of a process need not be in memory at the same time?

- A. swapping
- B. context switch
- C. demand paging
- D. thrashing
- E. virtual memory

Answer Key: **C**

146. Which of the following keeps track of where in memory a process is stored?

- A. process management
- B. memory management

- C. multiprogramming
- D. timesharing
- E. CPU scheduling

Answer Key: **B**

147. Which of the following best describes a partitioning approach in which partitions can have different sizes, but each keeps its original size?

- A. dynamic partitions
- B. fixed partitions
- C. both A and B
- D. neither A or B

Answer Key: **B**

148. True or False? Physical addresses must be converted to logical addresses in order to carry out the reference being made.

A. True

B. FalseAnswer Key: **False**

149. True or False? A process in the running state may be forced to give up the CPU in order to wait for resources.

A. True

B. FalseAnswer Key: **True**

150. Which of the following describes a reference made to an actual location in main memory?

- A. single contiguous
- B. logical address
- C. physical address
- D. partition
- E. paged

Answer Key: **C**

151. Which of the following describes a partition selection algorithm in which the program is allocated to the smallest partition big enough to hold it?

- A. best fit
- B. worst fit
- C. shortest fit
- D. first fit
- E. last fit

Answer Key: **A**

152. True or False? An operating system acts like a playground monitor, making sure all of the participants "share nicely."

A. True

B. False Answer Key: **True**

153. Which of the following describes a CPU scheduling algorithm in which each process is given a small amount of time to use the CPU before being forced to wait until its turn comes around again?

- A. shortest-job-next
- B. first-come, first-served
- C. time slice
- D. round robin
- E. turnaround time

Answer Key: **D**

154. True or False? Application software interacts directly with the computer hardware.

A. True

B. False Answer Key: **False**

155. Which of the following tracks the progress of a program during execution?

- A. process management
- B. memory management
- C. multiprogramming
- D. timesharing
- E. CPU scheduling

Answer Key: **A**

156. True or False? The process life cycle describes the conceptual states through which a process moves as it is managed by the operating system.

A. True

B. False Answer Key: **True**

157. Which of the following specifies a file or directory beginning with the current working directory?

A. working directory

B. directory tree

C. root directory

D. relative path

E. absolute path

Answer Key: **D**

158. Which of the following is the currently active subdirectory?

A. working directory

B. directory tree

C. root directory

D. relative path

E. absolute path

Answer Key: **A**

159. Which of the following describes the amount of time it takes to move the read/write heads to the appropriate cylinder?

- A. first-come, first-served
- B. SCAN
- C. shortest-seek-time-first
- D. latency
- E. seek time

Answer Key: **E**

160. The doc and wp3 file extensions are generally used for which of the following?

- A. text data file
- B. audio file
- C. image file
- D. word processing document
- E. program source file

Answer Key: **D**

161. True or False? The operating system helps the user, or an application program, perform various operations on a file.

A. True

B. False
Answer Key: **True**

162. The txt file extension is generally used for which of the following?

- A. text data file
- B. audio file
- C. image file
- D. word processing document
- E. program source file

Answer Key: **A**

163. Which of the following moves the read/write heads the minimum distance necessary to satisfy any pending request?

- A. first-come, first-served
- B. SCAN
- C. shortest-seek-time-first
- D. latency
- E. seek time

Answer Key: **C**

164. True or False? The current file pointer indicates which record in a file is currently being accessed.

A. True

B. False Answer Key: **True**

165. Which of the following contains bits organized into groups of 8 or 16 that represent characters from a character set?

A. binary file

B. direct access file

C. sequential access
file

D. text file

E. directory

Answer Key: **D**

166. In which disk scheduling algorithm could starvation occur?

A. first-come, first-
served

B. SCAN

C. shortest-seek-time-
first

D. latency

E. seek time

Answer Key: **C**

167. Which of the following is the last part of the file name that gives an indication of what kind of data the file contains?

- A. file name
- B. file type
- C. file system
- D. file extension
- E. directory

Answer Key: **D**

168. True or False? A binary file might contain image or audio data.

A. True

B. False Answer Key: **True**

169. Which of the following is a named group of files?

- A. file name
- B. file type
- C. file system
- D. file extension
- E. directory

Answer Key: **E**

170. The mp3, au, and wav file extensions are generally used for which of the following?

- A. text data file
- B. audio file
- C. image file
- D. word processing document
- E. program source file

Answer Key: **B**

171. Which of the following processes disk requests in the order in which they arrive?

- A. first-come, first-served
- B. SCAN
- C. shortest-seek-time-first
- D. latency
- E. seek time

Answer Key: **A**

172. True or False? A user's ability to perform certain operations on a file depend on the permissions that user has been granted.

A. True

B. False Answer Key: **True**

173. Which of the following describes a file that must be read or written in a linear manner?

- A. binary file
- B. direct access file
- C. sequential access file
- D. text file
- E. directory

Answer Key: **C**

174. Which of the following shows the hierarchical organization of the file system?

- A. working directory
- B. directory tree
- C. root directory
- D. relative path
- E. absolute path

Answer Key: **B**

175. The gif, tiff, and jpg file extensions are generally used for which of the following?

- A. text data file
- B. audio file
- C. image file
- D. word processing document
- E. program source file

Answer Key: **C**

176. Which of the following describes the amount of time it takes the platter to rotate into the proper position for reading or writing?

- A. first-come, first-served
- B. SCAN
- C. shortest-seek-time-first
- D. latency
- E. seek time

Answer Key: **D**

177. True or False? Path names are specified using the same syntax in all operating systems.

A. True

B. False Answer Key: **False**

178. Which of the following is the topmost directory, in which all others are contained?

- A. working directory
- B. directory tree
- C. root directory
- D. relative path
- E. absolute path

Answer Key: **C**

179. Which of the following uses an elevator-like algorithm to service disk requests as it moves the heads from one extreme to the other?

- A. first-come, first-served
- B. SCAN
- C. shortest-seek-time-first
- D. latency
- E. seek time

Answer Key: **B**

180. The java, c, and cpp file extensions are generally used for which of the following?

- A. text data file
- B. audio file
- C. image file
- D. word processing document
- E. program source file

Answer Key: **E**

181. True or False? A text file does not store binary digits (bits).

A. True

B. False Answer Key: **False**

182. Which of the following specifies a file or directory beginning with the root directory?

- A. working directory
- B. directory tree
- C. root directory
- D. relative path
- E. absolute path

Answer Key: **E**

183. True or False? A directory tree conceptually organizes the files in secondary memory into a hierarchy.

A. True

B. False Answer Key: **True**

184. True or False? Sequential files mirror the sequential nature of magnetic tape.

A. True

B. False Answer Key: **True**

185. Which of the following best describes the kind of information found in a file?

- A. file name
- B. file type
- C. file system
- D. file extension
- E. directory

Answer Key: **B**

186. True or False? Both sequential files and direct access files can be stored on either magnetic tape or magnetic disk.

A. True

B. False Answer Key: **True**

187. True or False? A spreadsheet cell can contain data but not a formula.

A. True

B. False Answer Key: **False**

188. Which of the following represents a single piece of information in a database, such as a person's last name?

- A. record
- B. key
- C. field
- D. query
- E. table

Answer Key: **C**

189. Which of the following is the degree to which authorized users can access information for legitimate purposes?

- A. integrity
- B. cryptography
- C. confidentiality
- D. availability
- E. cipher

Answer Key: **D**

190. Which of the following describes a spreadsheet calculation that cannot be resolved?

- B. range
- C. formula
- D. cell
- E. circular
reference

Answer Key: **E**

191. Which of the following is the process of ensuring that data can be modified only by appropriate mechanisms?

- A. integrity
- B. cryptography
- C.
confidentiality
- D. availability
- E. cipher

Answer Key: **A**

192. Which of the following is composed of a related set of database records?

- A. SQL
- B. key
- C. field
- D. query
- E. table

Answer Key: **E**

193. Which of the following is a common database language?

- A. SQL
- B. key
- C. field
- D. query
- E. schema

Answer Key: **A**

194. True or False? Using an asterisk (*) in an SQL select statement will return all attributes from the selected records.

A. True

B. False
Answer Key: **True**

195. Which of the following represents a single-column range in a spreadsheet?

- A. G14..H27
- B. J24
- C. A3..A7
- D. =J24/
J23
- E. 15B

Answer Key: **C**

196. Which of the following represents a formula in a spreadsheet?

- A. G14..H27
- B. J24
- C. A3..A7
- D. =J24/
J23
- E. 15B

Answer Key: **D**

197. True or False? A spreadsheet cell can contain numeric or text data.

A. True

B. False Answer Key: **True**

198. True or False? The SQL select statement is used to retrieve particular data from the database.

A. True

B. False Answer Key: **True**

199. Which of the following is used to specify a set of adjacent elements in a spreadsheet?

A. what-if

B. range

C. formula

D. cell

E. circular
reference

Answer Key: **B**

200. Which of the following represents a single cell in a spreadsheet?

A.
G14..H27

B. J24

C. A3..A7

D. =J24/
J23

E. 15B

Answer Key: **B**

201. True or False? Spreadsheets are dynamic in that they respond instantly to changes made to data, including insertions and deletions.

A. True

B. False Answer Key: **True**

202. Which of the following designates a single location in a spreadsheet?

A. what-if

B. range

C. formula

D. cell

E. circular reference

Answer Key: **D**

203. Which of the following database elements is composed of a set of related data items, such as a person's name, address, and id number?

A. record

B. key

C. field

D. query

E. table

Answer Key: **A**

204. True or False? Spreadsheets are particularly good at performing what-if analysis.

A. True

B. False Answer Key: **True**

205. Which of the following is the field of study related to encoded information?

A. integrity

B. cryptography

C. confidentiality

D. availability

E. cipher

Answer Key: **B**

206. True or False? Risk analysis is the process of determining the nature and likelihood of the risks to important data.

A. True

B. False Answer Key: **True**

207. Which of the following is used to retrieve data from a database?

A. record

- B. key
- C. field
- D.
query
- E. table

Answer Key: **D**

208. Which of the following is data appended to a message to ensure the authenticity of the message?

- A. public-key
cryptography
- B. cryptanalysis
- C. digital signature
- D. substitution cipher
- E. transposition cipher

Answer Key: **C**

209. Which of the following is used to perform a calculation in a spreadsheet?

- A. what-if
- B. range
- C. formula
- D. cell
- E. circular reference

Answer Key: **C**

210. Which of the following represents a multi-column range in a spreadsheet?

- A. G14..H27
- B. J24
- C. A3..A7
- D. =J24/J23
- E. 15B

Answer Key: **A**

211. Which of the following is the process of ensuring that data is protected from unauthorized access?

- A. integrity
- B. cryptography
- C. confidentiality
- D. availability
- E. cipher

Answer Key: **C**