COMPUTER ORGANIZATION AND ARCHITECTURE

BCA

Multiple choice questions

1. In Reverse Polish notation, expression A*B+C*D is written as
   (A) AB*CD*+ (B) A*BCD*+ (C) AB*CD+* (D) A*B*CD+
   Ans: A
2. SIMD represents an organization that _____.
   (A) refers to a computer system capable of processing several programs at the same time.
   (B) represents organization of single computer containing a control unit, processor unit and a memory unit.
   (C) includes many processing units under the supervision of a common control unit
   (D) none of the above.
   Ans: C
3. Floating point representation is used to store
   (A) Boolean values (B) whole numbers (C) real integers (D) integers
   Ans: C
4. Suppose that a bus has 16 data lines and requires 4 cycles of 250 nsecs each to transfer data. The bandwidth of this bus would be 2 Megabytes/sec. If the cycle time of the bus was reduced to 125 nsecs and the number of cycles required for transfer stayed the same what would the bandwidth of the bus?
   (A) 1 Megabyte/sec (B) 4 Megabytes/sec
   (C) 8 Megabytes/sec (D) 2 Megabytes/sec
   Ans: D
5. Assembly language
   (A) uses alphabetic codes in place of binary numbers used in machine language
   (B) is the easiest language to write programs
   (C) need not be translated into machine language
   (D) None of these
   Ans: A
6. In computers, subtraction is generally carried out by
   (A) 9's complement (B) 10's complement
   (C) 1's complement (D) 2's complement
   Ans: D
7. The amount of time required to read a block of data from a disk into memory is composed of seek time, rotational latency, and transfer time. Rotational latency refers to
   (A) the time its takes for the platter to make a full rotation
   (B) the time it takes for the read-write head to move into position over the appropriate track
   (C) the time it takes for the platter to rotate the correct sector under the head
   (D) none of the above

Ans: A

8. What characteristic of RAM memory makes it not suitable for permanent storage?
   (A) too slow (B) unreliable (C) it is volatile (D) too bulky
   Ans: C
9. Computers use addressing mode techniques for _____.
   (A) giving programming versatility to the user by providing facilities as pointers to memory counters for loop control
   (B) to reduce no. of bits in the field of instruction
   (C) specifying rules for modifying or interpreting address field of the instruction
   (D) All the above
   Ans: D
10. The circuit used to store one bit of data is known as
    (A) Register (B) Encoder (C) Decoder (D) Flip Flop
    Ans: D
11. (2FAOC) 16 is equivalent to
    (A) (195 084) 10 (B) (001011111010 0000 1100) 2
    (C) Both (A) and (B) (D) None of these
    Ans: B
12. The average time required to reach a storage location in memory and obtain its contents is called the
    (A) seek time (B) turnaround time (C) access time (D) transfer time
    Ans: C
13. Which of the following is not a weighted code?
    (A) Decimal Number system (B) Excess 3-cod
    (C) Binary number System (D) None of these
    Ans: B
14. The idea of cache memory is based
    (A) on the property of locality of reference (B) on the heuristic 90-10 rule
    (C) on the fact that references generally tend to cluster (D) all of the above
    Ans: A
15. Which of the following is lowest in memory hierarchy?
    (A) Cache memory
    (B) Secondary memory
    (C) Registers
    (D) RAM
    (E) None of these
    Ans (B) Secondary memory

16. The addressing mode used in an instruction of the form ADD X Y, is
    (A) Absolute (B) indirect (C) index (D) none of these
    Ans: C
17. If memory access takes 20 ns with cache and 110 ns with out it, then the ratio (cache uses a 10 ns memory) is

(A) 93% (B) 90% (C) 88% (D) 87%

Ans: B

18. In a memory-mapped I/O system, which of the following will not be there?

(A) LDA (B) IN (C) ADD (D) OUT

Ans: A

19. In a vectored interrupt.

(A) the branch address is assigned to a fixed location in memory.

(B) the interrupting source supplies the branch information to the processor through an interrupt vector.

(C) the branch address is obtained from a register in the processor

(D) none of the above

Ans: B

20. Von Neumann architecture is

(A) SISD (B) SIMD (C) MIMD (D) MISD

Ans: A

21. The circuit used to store one bit of data is known as

(A) Encoder (B) OR gate (C) Flip Flop (D) Decoder

Ans: C

22. Cache memory acts between

(A) CPU and RAM (B) RAM and ROM (C) CPU and Hard Disk (D) None of these

Ans: A

23. Write Through technique is used in which memory for updating the data

(A) Virtual memory (B) Main memory

(C) Auxiliary memory (D) Cache memory

Ans: D

24. Generally Dynamic RAM is used as main memory in a computer system as it

(A) Consumes less power (B) has higher speed

(C) has lower cell density (D) needs refreshing circuitary

Ans: B

25. In signed-magnitude binary division, if the dividend is (11100) 2 and divisor is (10011) 2 then the result is

(A) (00100) 2 (B) (10100) 2 (C) (11001) 2 (D) (01100) 2

Ans: B

26. Virtual memory consists of

(A) Static RAM (B) Dynamic RAM

(C) Magnetic memory (D) None of these

Ans: A

27. In a program using subroutine call instruction, it is necessary

(A) initialise program counter (B) Clear the accumulator

(C) Reset the microprocessor (D) Clear the instruction register

Ans: D

28. A Stack-organised Computer uses instruction of

(A) Indirect addressing (B) Two-addressing (C) Zero addressing (D) Index addressing

Ans: C

29. If the main memory is of 8K bytes and the cache memory is of 2K words. It uses associative mapping. Then each word of cache memory shall be

(A) 11 bits (B) 21 bits (C) 16 bits (D) 20 bits

Ans: C

30 A-Flip Flop can be converted into T-Flip Flop by using additional logic circuit

(A) n TQD =• (B) T D = (C) D = T . Q n (D) n TQD =⊕

Ans: D

31. Logic X-OR operation of (4ACO) H & (B53F) H results

(A) AACB (B) 0000 (C) FFFF (D) ABCD

Ans: C

32. When CPU is executing a Program that is part of the Operating System, it is said to be in (A) Interrupt mode (B) System mode (C) Half mode (D) Simplex mode

Ans: B

33. An n-bit microprocessor has

(A) n-bit program counter (B) n-bit address register

(C) n-bit ALU (D) n-bit instruction register

Ans: D

34. Cache memory works on the principle of

(A) Locality of data (B) Locality of memory

(C) Locality of reference (D) Locality of reference & memory

Ans: C

35. The main memory in a Personal Computer (PC) is made of

(A) cache memory. (B) static RAM

(C) Dynamic Ram (D) both (A) and (B) .

Ans: D

36. In computers, subtraction is carried out generally by

(A) 1's complement method (B) 2's complement method

(C) signed magnitude method (D) BCD subtraction method

Ans: B

37. PSW is saved in stack when there is a

(A) interrupt recognised (B) execution of RST instruction

(C) Execution of CALL instruction (D) All of these

Ans: A

38. The multiplicand register & multiplier register of a hardware circuit implementing booth's algorithm have (11101) & (1100). The result shall be

(A) (812) 10 (B) (-12) 10 (C) (12) 10 (D) (-812) 10

Ans: A

39. The circuit converting binary data in to decimal is

(A) Encoder (B) Multiplexer (C) Decoder (D) Code converter

Ans: D

40. A three input NOR gate gives logic high output only when
(A) one input is high (B) one input is low
(C) two input are low (D) all input are high
Ans: D

41. n bits in operation code imply that there are _____ possible distinct operators (A) 2n (B) 2n (C) n/2 (D) n2
Ans: B

42. _____ register keeps tracks of the instructions stored in program stored in memory.
(A) AR (Address Register) (B) XR (Index Register)
(C) PC (Program Counter) (D) AC (Accumulator)
Ans: C

43. Memory unit accessed by content is called
(A) Read only memory (B) Programmable Memory
(C) Virtual Memory (D) Associative Memory
Ans: D

44. 'Aging registers' are
(A) Counters which indicate how long ago their associated pages have been referenced.
(B) Registers which keep track of when the program was last accessed.
(C) Counters to keep track of last accessed instruction.
(D) Counters to keep track of the latest data structures referred.
Ans: A

45 The instruction 'ORG O' is a
(A) Machine Instruction. (B) Pseudo instruction.
(C) High level instruction. (D) Memory instruction.
Ans: B

46 Translation from symbolic program into Binary is done in
(A) Two passes. (B) Directly (C) Three passes. (D) Four passes.
Ans: A

47 A floating point number that has a O in the MSB of mantissa is said to have
(A) Overflow (B) Underflow (C) Important number (D) Undefined
Ans: B

48 The BSA instruction is
(A) Branch and store accumulator (B) Branch and save return address
(C) Branch and shift address (D) Branch and show accumulator
Ans: B

49 State whether True or False.
(i) Arithmetic operations with fixed point numbers take longer time for execution as compared to with floating point numbers.
Ans: True.
(ii) An arithmetic shift left multiplies a signed binary number by 2.

Ans: False.

50 Logic gates with a set of input and outputs is arrangement of

(A) Combinational circuit (B) Logic circuit (C) Design circuits (D) Register

Ans: A

51. MIMD stands for

(A) Multiple instruction multiple data (B) Multiple instruction memory data

(C) Memory instruction multiple data (D) Multiple information memory data

Ans: A

52 A k-bit field can specify any one of

(A) 3k registers (B) 2k registers

(C) K2 registers (D) K3 registers

Ans: B

53 The time interval between adjacent bits is called the

(A) Word-time (B) Bit-time (C) Turn around time (D) Slice time

Ans: B

54 A group of bits that tell the computer to perform a specific operation is known as

(A) Instruction code (B) Micro-operation (C) Accumulator (D) Register

Ans: A

55 The load instruction is mostly used to designate a transfer from memory to a processor register known as

(A) Accumulator (B) Instruction Register

(C) Program counter (D) Memory address Register

Ans: A

56 The communication between the components in a microcomputer takes place via the address and

(A) I/O bus (B) Data bus (C) Address bus (D) Control lines

Ans: B

57 An instruction pipeline can be implemented by means of

(A) LIFO buffer (B) FIFO buffer (C) Stack (D) None of the above

Ans: B

58 Data input command is just the opposite of a

(A) Test command (B) Control command (C) Data output (D) Data channel

Ans: C

59 A microprogram sequencer

(A) generates the address of next micro instruction to be executed.

(B) generates the control signals to execute a microinstruction.

(C) sequentially averages all microinstructions in the control memory.

(D) enables the efficient handling of a micro program subroutine.

Ans: A

60 . A binary digit is called a

(A) Bit (B) Byte (C) Number (D) Character

Ans: A

61 A flip-flop is a binary cell capable of storing information of

(A) One bit (B) Byte (C) Zero bit (D) Eight bit

Ans: A

62 The operation executed on data stored in registers is called

(A) Macro-operation (B) Micro-operation

(C) Bit-operation (D) Byte-operation

Ans: B

63 MRI indicates

(A) Memory Reference Information. (B) Memory Reference Instruction.

(C) Memory Registers Instruction. (D) Memory Register information

Ans: B

64 Self-contained sequence of instructions that performs a given computational task is called

(A) Function (B) Procedure (C) Subroutine (D) Routine

Ans: A

65 Microinstructions are stored in control memory groups, with each group specifying a

(A) Routine (B) Subroutine (C) Vector (D) Address

Ans: A

66 An interface that provides a method for transferring binary information between internal storage and external devices is called

(A) I/O interface (B) Input interface (C) Output interface (D) I/O bus

Ans: A

67 Status bit is also called

(A) Binary bit (B) Flag bit (C) Signed bit (D) Unsigned bit

Ans: B

68 An address in main memory is called

(A) Physical address (B) Logical address (C) Memory address (D) Word address

Ans: A

69 If the value V(x) of the target operand is contained in the address field itself, the addressing mode is

(A) immediate. (B) direct. (C) indirect. (D) implied.

Ans: B

70 can be represented in a signed magnitude format and in a 1's complement format as

(A) 111011 & 100100 (B) 100100 & 111011

(C) 011011 & 100100 (D) 100100 & 011011

Ans: A

71 The instructions which copy information from one location to another either in the processor's internal register set or in the external main memory are called

(A) Data transfer instructions. (B) Program control instructions.

(C) Input-output instructions. (D) Logical instructions.

Ans: A

72 A device/circuit that goes through a predefined sequence of states upon the application of input pulses is called

(A) register (B) flip-flop (C) transistor. (D) counter.

Ans: D

73. The performance of cache memory is frequently measured in terms of a quantity called

(A) Miss ratio. (B) Hit ratio. (C) Latency ratio. (D) Read ratio.

Ans: C

74. The information available in a state table may be represented graphically in a

(A) simple diagram. (B) state diagram. (C) complex diagram. (D) data flow diagram.

Ans: B

75 Content of the program counter is added to the address part of the instruction in order to obtain the effective address is called.

(A) relative address mode. (B) index addressing mode.

(C) register mode. (D) implied mode.

Ans: A

76 An interface that provides I/O transfer of data directly to and form the memory unit and peripheral is termed as

(A) DDA. (B) Serial interface. (C) BR. (D) DMA.

Ans: D

77 The 2s compliment form (Use 6 bit word) of the number 1010 is

(A) 111100. (B) 110110. (C) 110111. (D) 1011.

Ans: B

78 A register capable of shifting its binary information either to the right or the left is called a

(A) parallel register. (B) serial register. (C) shift register. (D) storage register.

Ans: C

79 What is the content of Stack Pointer (SP)?

(A) Address of the current instruction (B) Address of the next instruction

(C) Address of the top element of the stack (D) Size of the stack.

Ans: C

80 Which of the following interrupt is non maskable

(A) INTR. (B) RST 7.5. (C) RST 6.5. (D) TRAP.

Ans: D

81 Which of the following is a main memory

(A) Secondary memory. (B) Auxiliary memory.

(C) Cache memory. (D) Virtual memory.

Ans: C

82 Which of the following are not a machine instructions

(A) MOV. (B) ORG. (C) END. (D) (B) & (C) .

Ans: D

83 In Assembly language programming, minimum number of operands required for an instruction is/are

(A) Zero. (B) One. (C) Two. (D) Both (B) & (C) .

Ans: A

84 The maximum addressing capacity of a micro processor which uses 16 bit database & 32 bit address base is

(A) 64 K. (B) 4 GB. (C) both (A) & (B) . (D) None of these.

Ans: B

85 The memory unit that communicates directly with the CPU is called the

(A) main memory (B) Secondary memory

(C) shared memory (D) auxiliary memory.

Ans: A

86 The average time required to reach a storage location in memory and obtain its contents is called

(A) Latency time. (B) Access time.

(C) Turnaround time. (D) Response time.

Ans: B

State True or False

87 A byte is a group of 16 bits.

Ans: False

88 A nibble is a group of 16 bits.

Ans: False

89 When a word is to be written in an associative memory, address has got to be given.

Ans: False

90 When two equal numbers are subtracted, the result would be _____and not_____.

Ans: +ZERO, -ZERO.

91 A _____development system and an _____are essential tools for writing large assembly language programs.

Ans: Microprocessor, assembler

92 In an operation performed by the ALU, carry bit is set to 1 if the end carry C 8 is _____. It is cleared to 0 (zero) if the carry is _____ _____.

Ans: One, zero

93 A successive A/D converter is

(A) a high-speed converter. (B) a low speed converter.

(C) a medium speed converter. (D) none of these.

Ans: C

94 When necessary, the results are transferred from the CPU to main memory by

(A) I/O devices. (B) CPU. (C) shift registers. (D) none of these.

Ans: C

96 A combinational logic circuit which sends data coming from a single source to two or more separate destinations is

(A) Decoder. (B) Encoder. (C) Multiplexer. (D) Demultiplexer.

Ans: D

97 In which addressing mode the operand is given explicitly in the instruction

(A) Absolute. (B) Immediate . (C) Indirect. (D) Direct.

Ans: B

98 A stack organized computer has

(A) Three-address Instruction. (B) Two-address Instruction.

(C) One-address Instruction. (D) Zero-address Instruction.

Ans: D

99 A Program Counter contains a number 825 and address part of the instruction contains the number 24. The effective address in the relative address mode, when an instruction is read from the memory is

(A) 849. (B) 850. (C) 801. (D) 802.

Ans: B

102 A page fault

(A) Occurs when there is an error in a specific page.

(B) Occurs when a program accesses a page of main memory.

(C) Occurs when a program accesses a page not currently in main memory.

(D) Occurs when a program accesses a page belonging to another program.

Ans: C

103. The load instruction is mostly used to designate a transfer from memory to a processor register known as____.

A. Accumulator B. Instruction Register

C. Program counter D. Memory address Register

Ans: A

104. A group of bits that tell the computer to perform a specific operation is known as____.

A. Instruction code B. Micro-operation

C. Accumulator D. Register

Ans: A

105. The time interval between adjacent bits is called the_____.

A. Word-time B. Bit-time

C. Turn around time D. Slice time

Ans: B

106. A k-bit field can specify any one of_____.

A. 3k registers B. 2k registers

C. K2 registers D. K3 registers

Ans: B

107. MIMD stands for _____.

A. Multiple instruction multiple data

B. Multiple instruction memory data

C. Memory instruction multiple data

D. Multiple information memory data

Ans: A

108. Logic gates with a set of input and outputs is arrangement of_____.

A. Computational circuit
B. Logic circuit
C. Design circuits
D. Register

Ans: A

109. The average time required to reach a storage location in memory and obtain its contents is called_____.

A. Latency time. B. Access time.
C. Turnaround time. D. Response time.

Ans: B

110. The BSA instruction is_____.

A. Branch and store accumulator B. Branch and save return address
C. Branch and shift address D. Branch and show accumulator

Ans: B

111. A floating point number that has a O in the MSB of mantissa is said to have_____.

A. Overflow B. Underflow
C. Important number D. Undefined

Ans: B

112. Translation from symbolic program into Binary is done in_____.

A. Two passes. B. Directly
C. Three passes. D. Four passes.

Ans: A

113. The instruction 'ORG O' is a_____.

A. Machine Instruction. B. Pseudo instruction.
C. High level instruction. D. Memory instruction.

Ans: B

114. 'Aging registers' are _____.

A. Counters which indicate how long ago their associated pages have been referenced.
B. Registers which keep track of when the program was last accessed.
C. Counters to keep track of last accessed instruction.
D. Counters to keep track of the latest data structures referred.

Ans: A

115. Memory unit accessed by content is called_____.

A. Read only memory B. Programmable Memory
C. Virtual Memory D. Associative Memory

Ans: D

116. _____ register keeps tracks of the instructions stored in program stored in memory.

A. AR (Address Register) B. XR (Index Register)
C. PC (Program Counter) D. AC (Accumulator)

Ans: C

117. n bits in operation code imply that there are _____ possible distinct operators.

A. 2n B. 2n
C. n/2 D. n2

Ans: B

118. A three input NOR gate gives logic high output only when_____.

A. one input is high B. one input is low

C. two input are low D. all input are high

Ans: D

119. The circuit converting binary data in to decimal is_____.

A. Encoder B. Multiplexer

C. Decoder D.Code converter

Ans: D

120. The multiplicand register & multiplier register of a hardware circuit implementing booth's algorithm have (11101) & (1100). The result shall be _____.

A. (812)10 B. (-12)10

C. (12)10 D. (-812)10

Ans: A

121. PSW is saved in stack when there is a _____.

A. interrupt recognized B. execution of RST instruction

C. Execution of CALL instruction D. All of these

Ans: A

122. In computers, subtraction is carried out generally by____.

A. 1's complement method B. 2's complement method

C. signed magnitude method D. BCD subtraction method

Ans: B

123. The main memory in a Personal Computer (PC) is made of_____.

A. cache memory. B. static RAM

C. Dynamic Ram D. bothA.and (B).

Ans: D

124. Cache memory works on the principle of_____.

A. Locality of data B. Locality of memory

C. Locality of reference D. Locality of reference & memory

Ans: C

125. An n-bit microprocessor has_____.

A. n-bit program counter B. n-bit address register

C. n-bit ALU D. n-bit instruction register

Ans: D

126. When CPU is executing a Program that is part of the Operating System, it is said to be in _____.

A. Interrupt mode B. System mode

C. Half mode D. Simplex mode

Ans: B

127. Logic X-OR operation of (4ACO)H& (B53F)H results _____.

A. AACB B. 0000

C. FFFF D. ABCD

Ans: C

128. If the main memory is of 8K bytes and the cache memory is of 2K words. It uses associative mapping. Then each word of cache memory shall be_____.

A. 11 bits B. 21 bits

C. 16 bits D. 20 bits

Ans: C

129. A Stack-organised Computer uses instruction of _____.

A. Indirect addressing B. Two-addressing
C. Zero addressing D. Index addressing

Ans: C

130. In a program using subroutine call instruction, it is necessary_____.

A. initialize program counter B. Clear the accumulator
C. Reset the microprocessor D. Clear the instruction register

Ans: D

131. Virtual memory consists of _____.

A. Static RAM B. Dynamic RAM
C. Magnetic memory D. None of these

Ans: A

132. In signed-magnitude binary division, if the dividend is (11100)2 and divisor is (10011)2 then the result is _____.

A. (00100)2 B. (10100)2
C. (11001)2 D. (01100)2

Ans: B

133. Generally Dynamic RAM is used as main memory in a computer system as it_____.

A. Consumes less power B. has higher speed
C. has lower cell density D. needs refreshing circuitry

Ans: B

134. Write Through technique is used in which memory for updating the data _____.

A. Virtual memory B. Main memory
C. Auxiliary memory D. Cache memory

Ans: D

135. Cache memory acts between_____.

A. CPU and RAM B. RAM and ROM
C. CPU and Hard Disk D. None of these

Ans: A

136. The circuit used to store one bit of data is known as _____.

A. Encoder B. OR gate
C. Flip Flop D. Decoder

Ans: C

137. Von Neumann architecture is _____.

A. SISD B. SIMD
C. MIMD D. MISD

Ans: A

138. In a vectored interrupt.

A. the branch address is assigned to a fixed location in memory.
B. the interrupting source supplies the branch information to the processor through an interrupt vector.
C. the branch address is obtained from a register in the processor
D. none of the above

Ans: B

139. . In a memory-mapped I/O system, which of the following will not be there?

A. LDA B. IN

C. ADD D. OUT

Ans: A

140. If memory access takes 20 ns with cache and 110 ns without it, then the ratio (cache uses a 10 ns memory) is _____.

A. 93% B. 90%

C. 88% D. 87%

Ans: B

141. The addressing mode used in an instruction of the form ADD X Y, is _____.

A. Absolute B. indirect

C. index D. none of these

Ans: C

142. _____ register keeps track of the instructions stored in program stored in memory.

A. AR (Address Register) B. XR (Index Register)

C. PC (Program Counter) D. AC (Accumulator)

Ans: C

143. The idea of cache memory is based _____.

A. on the property of locality of reference

B. on the heuristic 90-10 rule

C. on the fact that references generally tend to cluster

D. all of the above

Ans: A

144. Which of the following is not a weighted code?

A. Decimal Number system B. Excess 3-cod

C. Binary number System D. None of these

Ans: B

145. The average time required to reach a storage location in memory and obtain its contents is called the _____.

A. seek time B. turnaround time

C. access time D. transfer time

Ans: C

146. (2FAOC)16 is equivalent to _____.

A. (195 084)10 B. (001011111010 0000 1100)2

C. Both A.and (B) D. None of these

Ans: B

147. The circuit used to store one bit of data is known as_____.

A. Register B. Encoder

C. Decoder D. Flip Flop

Ans: D

148. . Computers use addressing mode techniques for _____.

A. giving programming versatility to the user by providing facilities as pointers to memory counters for loop control

B. to reduce no. of bits in the field of instruction

C. specifying rules for modifying or interpreting address field of the instruction

D. All the above

Ans: D

149. What characteristic of RAM memory makes it not suitable for permanent storage?

A. too slow
B. unreliable
C. it is volatile
D. too bulky

Ans: C

150. The amount of time required to read a block of data from a disk into memory is composed of seek time, rotational latency, and transfer time. Rotational latency refers to _____.

A. the time its takes for the platter to make a full rotation
B. the time it takes for the read-write head to move into position over the appropriate track
C. the time it takes for the platter to rotate the correct sector under the head
D. none of the above

Ans: A

151. In computers, subtraction is generally carried out by _____.

A. 9's complement
B. 10's complement
C. 1's complement
D. 2's complement

Ans: D

152. Assembly language _____.

a. uses alphabetic codes in place of binary numbers used in machine language
b. is the easiest language to write programs
c. need not be translated into machine language
d. None of these

Ans: A

153. Suppose that a bus has 16 data lines and requires 4 cycles of 250 nsecs each to transfer data. The bandwidth of this bus would be 2 Megabytes/sec. If the cycle time of the bus was reduced to 125 nsecs and the number of cycles required for transfer stayed the same what would the bandwidth of the bus?

A. 1 Megabyte/sec
B. 4 Megabytes/sec
C. 8 Megabytes/sec
D. 2 Megabytes/sec

Ans: D

154. Floating point representation is used to store _____.

A. Boolean values
B. whole numbers
C. real integers
D. integers

Ans: C

155. SIMD represents an organization that _____.

a. refers to a computer system capable of processing several programs at the same time.
b. represents organization of single computer containing a control unit, processor unit and a memory unit.
c. includes many processing units under the supervision of a common control unit
d. none of the above.

Ans: C

156. In Reverse Polish notation, expression A*B+C*D is written as

A. AB*CD*+
B. A*BCD*+
C. AB*CD+*
D. A*B*CD+

Ans: A

157. Processors of all computers, whether micro, mini or mainframe must have
a. ALU b. Primary Storage
c. Control unit d. All of above

Ans b

158. What is the control unit's function in the CPU?
a. To transfer data to primary storage
b. to store program instruction
c. to perform logic operations
d. to decode program instruction

Ans e

159. What is meant by a dedicated computer?
a. which is used by one person only
b. which is assigned to one and only one task
c. which does one kind of software
d. which is meant for application software only

Ans f

160. The most common addressing techiniques employed by a CPU is
a. immediate b. direct
c. indirect d. register e. all of the above

Ans d

161. Pipeline implement
a. fetch instruction b. decode instruction
c. fetch operand d. calculate operand
e. execute instruction f. all of abve

Ans d

162. Which of the following code is used in present day computing was developed by IBM corporation?
a. ASCII b. Hollerith Code
c. Baudot code d. EBCDIC code

Ans d

163. When a subroutine is called, the address of the instruction following the CALL instructions stored in/on the
a. stack pointer b. accumulator
c. program counter d. stack

Ans d

164. A microprogram written as string of 0's and 1's is a
a. symbolic microinstruction b. binary microinstruction
c. symbolic microprogram d. binary microprogram

Ans d

165. Interrupts which are initiated by an instruction are
a. internal b. external c. hardware d. software

Ans b

166. Memory access in RISC architecture is limited to instructions

a. CALL and RET b. PUSH and POP
c. STA and LDA d. MOV and JMP

Ans c

167. A collection of lines that connects several devices is called .....
A) bus B) peripheral connection wires
C) Both a and b D) internal wires

Ans A

168. A complete microcomputer system consist of .....
A) microprocessor B) memory
C) peripheral equipment D) all of the above

Ans D

169. PC Program Counter is also called .....
A) instruction pointer B) memory pointer
C) data counter D) file pointer

Ans A

170. In a single byte how many bits will be there?
A) 8 B) 16 C) 4 D) 32

Ans A

171. CPU does not perform the operation .....
A) data transfer B) logic operation
C) arithmetic operation D) all of the above

Ans A

172. The access time of memory is ..... the time required for performing any single CPU operation.
A) Longer thanB) Shorter than
C) Negligible than D) Same as

Ans A

173. Memory address refers to the successive memory words and the machine is called as .....
A) word addressable B) byte addressable
C) bit addressable D) Tera byte addressable

Ans A

174. A microprogram written as string of 0's and 1's is a .....
A) Symbolic microinstruction B) binary microinstruction
C) symbolic microinstruction D) binary microprogram

Ans D

175. A pipeline is like .....
A) an automobile assembly line B) house pipeline
C) both a and b D) a gas line

Ans A

176. Data hazards occur when .....
A) Greater performance loss
B) Pipeline changes the order of read/write access to operands

C) Some functional unit is not fully pipelined

D) Machine size is limited

Ans B

177. Where does a computer add and compare data?

A. Hard disk B. Floppy disk

C. CPU chip D:Memory chip

Ans C

178. Which of the following registers is used to keep track of address of the memory location where the next instruction is located?

A. Memory Address Register

B. Memory Data Register

C. Instruction Register

D. Program Register

Ans D

179. A complete microcomputer system consists of

A) microprocessor

B) memory

C) peripheral equipment

D) all of above

Ans D

180. CPU does not perform the operation

A. data transfer

B. logic operation

C. arithmetic operation

D. all of above

Ans B

181. Pipelining strategy is called implement

A. instruction execution

B. instruction prefetch

C. instruction decoding

D. instruction manipulation

Ans C

182. A stack is

A. an 8-bit register in the microprocessor

B. a 16-bit register in the microprocessor

C. a set of memory locations in R/WM reserved for storing information temporarily during the execution of computer

D. a 16-bit memory address stored in the program counter

Ans A

183. A stack pointer is

A. a 16-bit register in the microprocessor that indicate the beginning of the stack memory.

B. a register that decodes and executes 16-bit arithmetic expression.
C. The first memory location where a subroutine address is stored.
D. a register in which flag bits are stored

Ans A

184. The branch logic that provides decision making capabilities in the control unit is known as

A. controlled transfer
B. conditional transfer
C. unconditional transfer
D. none of above

Ans C

185. Interrupts which are initiated by an instruction are

A. internal
B. external
C. hardware
D. software

Ans D

186. A time sharing system imply

A. more than one processor in the system
B. more than one program in memory
C. more than one memory in the system
D. None of above

Ans B

187.Virtual memory is –
(1) an extremely large main memory
(2) an extremely large secondary memory
(3) an illusion of an extremely large memory
(4) a type of memory used in super computers

(5) None of these

Answers:
3

188.Fragmentation is -
(1) dividing the secondary memory into equal sized f ragments
(2) dividing the main memory into equal size f ragments
(3) f ragments of memory words used in a page
(4) f ragments of memory words unused in a page
(5) None of these

Answers:: 2

189.Which memory unit has lowest access time?
(1) Cache (2) Registers
(3) Magnetic Disk (4) Main Memory
(5) Pen drive

Answer :2

190.Cache memory-
(1) has greater capacity than RAM
(2) is f aster to access than CPU Registers
(3) is permanent storage
(4) f aster to access than RAM
(5) None of these
Answer 4
191.When more than one processes are running concurrently on a system-
(1) batched system
(2) real-time system
(3) multi programming system
(4) multiprocessing system
(5) None of these
Answers:
3

192.Which of the following memories must be refreshed many times per second?
a. Static RAM b. Dynamic RAM c. EPROM
d. ROM e. None of these
ans Static RAM
193.RAM stands for
a. Random origin money b. Random only memory
c. Read only memory d. Random access memory
e. None of these
ans Random access memory

194.CPU fetches the instruction from memory according to the value of
a) program counter
b) status register
c) instruction register
d) program status word

Answer:a.
195.A memory buffer used to accommodate a speed differential is called
a) stack pointer
b) cache

c) accumulator
d) disk buffer

Answer:b.
196.Which one of the following is the address generated by CPU?
a) physical address
b) absolute address
c) logical address
d) none of the mentioned
Answer:c.
197.Run time mapping from virtual to physical address is done by
a) memory management unit
b) CPU
c) PCI
d) none of the mentioned
Answer:a.
198.Memory management technique in which system stores and retrieves data from secondary storage for use in main memory is called
a) fragmentation
b) paging
c) mapping
d) none of the mentioned
Answer:b

199.The address of a page table in memory is pointed by
a) stack pointer
b) page table base register
c) page register
d) program counter

200.Program always deals with
a) logical address
b) absolute address
c) physical address
d) relative address

Answer:a