

**Computer System Architecture MCQ 01**

1. RTL stands for:
  - a. Random transfer language
  - b. Register transfer language**
  - c. Arithmetic transfer language
  - d. All of these
2. Which operations are used for addition, subtraction, increment, decrement and complement function:
  - a. Bus
  - b. Memory transfer
  - c. Arithmetic operation
  - d. All of these**
3. Which language is termed as the symbolic depiction used for indicating the series:
  - a. Random transfer language
  - b. Register transfer language**
  - c. Arithmetic transfer language
  - d. All of these
4. The method of writing symbol to indicate a provided computational process is called as a:
  - a. Programming language**
  - b. Random transfer language
  - c. Register transfer language
  - d. Arithmetic transfer language
5. In which transfer the computer register are indicated in capital letters for depicting its function:
  - a. Memory transfer
  - b. Register transfer**
  - c. Bus transfer
  - d. None of these
6. The register that includes the address of the memory unit is termed as the :
  - a. MAR**
  - b. PC
  - c. IR
  - d. None of these
7. The register for the program counter is signified as \_\_\_\_:
  - a. MAR
  - b. PC**
  - c. IR
  - d. None of these
8. In register transfer the instruction register as:
  - a. MAR
  - b. PC
  - c. IR**
  - d. None of these
9. In register transfer the processor register as:
  - a. MAR
  - b. PC
  - c. IR
  - d. RI**
10. How many types of micro operations:
  - a. 2
  - b. 4**
  - c. 6
  - d. 8
11. Which are the operation that a computer performs on data that put in register:
  - a. Register transfer
  - b. Arithmetic
  - c. Logical
  - d. All of these**
12. Which micro operations carry information from one register to another:
  - a. Register transfer**
  - b. Arithmetic
  - c. Logical
  - d. All of these
13. Micro operation is shown as:
  - a.  $R1 \rightarrow R2$
  - b.  $R1 \leftarrow R2$**
  - c. Both
  - d. None
14. In memory transfer location address is supplied by \_\_\_\_ that puts this on address bus:
  - a. ALU
  - b. CPU**
  - c. MAR
  - d. MDR
15. How many types of memory transfer operation:
  - a. 1
  - b. 2**
  - c. 3
  - d. 4
16. Operation of memory transfer are:
  - a. Read
  - b. Write
  - c. Both**
  - d. None
17. In memory read the operation puts memory address on to a register known as :
  - a. PC
  - b. ALU
  - c. MAR**
  - d. All of these
18. Which operation puts memory address in memory address register and data in DR:
  - a. Memory read
  - b. Memory write**
  - c. Both
  - d. None
19. Arithmetic operation are carried by such micro operation on stored numeric data available in \_\_\_\_:
  - a. Register**
  - b. Data
  - c. Both
  - d. None
20. In arithmetic operation numbers of register and the circuits for addition at \_\_\_\_:
  - a. ALU**
  - b. MAR
  - c. Both
  - d. None
21. Which operation are implemented using a binary counter or combinational circuit:
  - a. Register transfer
  - b. Arithmetic**
  - c. Logical
  - d. All of these
22. Which operation is binary type, and are performed on bits string that is placed in register:
  - a. Logical micro operation**
  - b. Arithmetic micro operation
  - c. Both
  - d. None

23. A micro operation every bit of a register is a:  
 a. Constant                    **b. Variable**  
 c. Both                            d. None
24. Which operation is extremely useful in serial transfer of data:  
 a. Logical micro operation  
 b. Arithmetic micro operation  
**c. Shift micro operation**  
 d. None of these
25. Which language specifies a digital system which uses specified notation:  
**a. Register transfer**    b. Arithmetic  
 c. Logical                    d. All of these
26. IR stands for:  
 a. Input representation  
**b. Intermediate representation**  
 c. Both                            d. None
27. HDL stands for:  
 a. Human description language  
**b. Hardware description language**  
 c. Hardware description land  
 d. None of these
28. VPCC stands for:  
 a. Variable portable C compiler  
**b. Very portable C compiler**  
 c. Both  
 d. None
29. In register transfer which system is a sequential logic system in which flip-flops and gates are constructed:  
**a. Digital system**    b. Register  
 c. Data                            d. None
30. High level language C supports register transfer technique for \_\_\_\_\_ application:  
**a. Executing**            b. Compiling  
 c. Both                            d. None
31. A counter is incremented by one and memory unit is considered as a collection of \_\_\_\_\_:  
 a. Transfer register    **b. Storage register**  
 c. RTL                            d. All of these
32. Which is the straight forward register transfer the data from register to another register temporarily:  
 a. Digital system  
 b. Register  
 c. Data  
**d. Register transfer operations**
33. In organization of a digital system register transfer of any digital system therefore it is called:  
 a. Digital system    b. Register  
 c. Data                    **d. Register transfer level**
34. The binary information of source register chosen by:  
 a. Demultiplexer    **b. Multiplexer**  
 c. Both                            d. None
35. Control transfer passes the function via control\_:  
 a. Logic                    b. Operation  
**c. Circuit**                    d. All of these
36. Register are assumed to use positive-edge-triggered \_\_\_\_\_:  
**a. Flip-flop**                    b. Logics  
 c. Circuit                            d. Operation
37. IDE stands for:  
 a. Input device electronics  
**b. Integrated device electronic**  
 c. Both                            d. None
38. ATA stands for:  
**a. Advance technology attachment**  
 b. Advance teach attachment  
 c. Both                            d. None
39. The memory bus is also referred as \_\_\_\_\_:  
**a. Data bus**                    b. Address bus  
 c. Memory bus            d. All of these
40. How many parts of memory bus:  
**a. 2**                            b. 3  
 c. 5                                d. 6
41. A three state gate defined as:  
 a. Analog circuit    b. Analog fundamentals  
 c. Both a&b            **d. Digital circuit**
42. In 3 state gate two states act as signals equal to:  
 a. Logic 0                    b. Logic 1  
 c. None of these    **d. Both a & b**
43. In 3 state gate third position termed as high impedance state which acts as:  
**a. Open circuit**            b. Close circuit  
 c. None of these            d. All of above
44. In every transfer, selection of register by bus is decided by:  
**a. Control signal**            b. No signal  
 c. All signal                    d. All of above

45. Every bit of register has:  
 a. 2 common line    b. 3 common line  
 c. **1 common line**    d. none of these
46. DDR2 stands for:  
 a. **Double data rate 2**  
 b. Data double rate 2  
 c. Dynamic data rate 2  
 d. Dynamic double rate 2
47. SDRAM stands for:  
 a. System dynamic random access memory  
 b. **Synchronous dynamic random access memory**    c. Both    d. None
48. Which is referred as a sequential circuit which contains the number of register as per the protocol:  
 a. RTL    b. **RAM**  
 c. MAR    d. All of these
49. Which operation refer bitwise manipulation of contents of register:  
 a. **Logical micro operation**  
 b. Arithmetic micro operation  
 c. Shift micro operation  
 d. None of these
50. Which symbol will be used to denote an micro operation:  
 a. (^)    b. (v)  
 c. Both    d. None
51. which symbol will be denote an AND micro operation:  
 a. (^)    b. (v)  
 c. Both    d. None
52. Which operation are associated with serial transfer of data:  
 a. Logical micro operation  
 b. Arithmetic micro operation  
 c. **Shift micro operation**  
 d. None of these
53. The bits are shifted and the first flip-flop receives its binary information from the\_\_\_\_\_  
 a. Serial output    b. **Serial input**  
 c. Both    d. None
54. How many types of shift micro operation:  
 a. 2    b. 4    c. **6**    d. 8
55. Which shift is a shift micro operation which is used to shift a signed binary number to the left or right:  
 a. Logical    b. **Arithmetic**  
 c. Both    d. None of these
56. Which shift is used for signed binary number:  
 a. Logical    b. **Arithmetic**  
 c. Both    d. None of these
57. Arithmetic left shift is used to multiply a signed number by\_\_\_\_\_  
 a. One    b. **Two**  
 c. Three    d. All of these
58. The variable of\_\_\_\_\_ correspond to hardware register:  
 a. RAM    b. **RTL**  
 c. ALU    d. MAR
59. In which shift is used to divide a signed number by two:  
 a. Logical right-shift  
 b. **Arithmetic right shift**  
 c. Logical left shift  
 d. Arithmetic left shift
60. Shift left is equal to:  
 a. **multiply by two**  
 b. add by two  
 c. divide by two  
 d. subtract by two

**Computer System Architecture MCQ 02**

1. \_\_\_\_\_ is a command given to a computer to perform a specified operation on some given data:
  - a. **An instruction**
  - b. Command
  - c. Code
  - d. None of these
2. An instruction is guided by \_\_\_\_\_ to perform work according:
  - a. PC
  - b. ALU
  - c. Both a and b
  - d. **CPU**
3. Two important fields of an instruction are:
  - a. Opcode
  - b. Operand
  - c. Only a
  - d. **Both a & b**
4. Each operation has its \_\_\_\_\_ opcode:
  - a. **Unique**
  - b. Two
  - c. Three
  - d. Four
5. \_\_\_\_\_ which are of these examples of Intel 8086 opcodes:
  - a. MOV
  - b. ADD
  - c. SUB
  - d. **All of these**
6. \_\_\_\_\_ specify where to get the source and destination operands for the operation specified by the \_\_\_\_:
  - a. **Operand fields and opcode**
  - b. Opcode and operand
  - c. Source and destination
  - d. CPU and memory
7. The source/destination of operands can be the \_\_\_\_ or one of the general-purpose register:
  - a. **Memory**
  - b. One
  - c. both
  - d. None of these
8. The complete set of op-codes for a particular microprocessor defines the \_\_\_\_\_ set for that processor:
  - a. Code
  - b. Function
  - c. Module
  - d. **Instruction**
9. Which is the method by which instructions are selected for execution:
  - a. Instruction selection
  - b. Selection control
  - c. **Instruction sequencing**
  - d. All of these
10. The simplest method of controlling sequence of instruction execution is to have each instruction explicitly specify:
  - a. **The address of next instruction to be run**
  - b. Address of previous instruction
  - c. Both a & b
  - d. None of these
11. As the instruction length increases \_\_\_\_\_ of instruction addresses \_\_\_\_\_ in \_\_\_\_\_ all the instruction is \_\_\_\_:
  - a. Implicit inclusion
  - b. Implicit and disadvantageous
  - c. **Explicit and disadvantageous**
  - d. Explicit and disadvantageous
12. \_\_\_\_\_ is the sequence of operations performed by CPU in processing an instruction:
  - a. Execute cycle
  - b. Fetch cycle
  - c. Decode
  - d. **Instruction cycle**
13. The time required to complete one instruction is called:
  - a. Fetch time
  - b. **Execution time**
  - c. Control time
  - d. All of these
14. \_\_\_\_\_ is the step during which a new instruction is read from the memory:
  - a. Decode
  - b. **Fetch**
  - c. Execute
  - d. None of these
15. \_\_\_\_\_ is the step during which the operations specified by the instruction are executed:
  - a. **Execute**
  - b. Decode
  - c. Both a & b
  - d. None of these
16. Decode \_\_\_\_\_ is \_\_\_\_\_ the step during which instruction is \_\_\_\_:
  - a. Initialized
  - b. Incremented
  - c. **Decoded**
  - d. Both b & c
17. The instruction fetch operation is initiated by loading the contents of program counter into the \_\_\_\_\_ and sends request to memory:
  - a. Memory register and read
  - b. Memory register and write
  - c. Data register and read
  - d. **Address register and read**
18. The contents of the program counter is the \_\_\_\_\_ of the instruction to be run:
  - a. Data
  - b. **Address**
  - c. Counter
  - d. None of these

19. The instruction read from memory is then placed in the \_\_\_\_\_ and contents of program counter is \_\_\_\_\_ so that it contains the address of \_\_\_\_\_ instruction in the program:
- Program counter, incremented and next
  - Instruction register, incremented and previous
  - Instruction register, incremented and next**
  - Address register, decremented and next
20. Execution \_\_\_\_\_ of instruction specified by instruction to perform:
- Operation**
  - Operands
  - Both a & b
  - None of these
21. \_\_\_\_\_ is a symbolic representation of discrete elements of information:
- Data
  - Code**
  - Address
  - Control
22. Group of binary bits(0&1) is known as:
- Binary code**
  - Digit code
  - Symbolic representation
  - None of these
23. A group of 4 binary bits is called:
- Nibble**
  - Byte
  - Decimal
  - Digit
24. BCD uses \_\_\_\_\_ binary number system to specify decimal numbers:
- 1-10
  - 1-9
  - 0-9**
  - 0-10
25. The \_\_\_\_\_ are assigned according to the position occupied by digits:
- Volume
  - Weight**
  - Mass
  - All of these
26. what is the BCD for a decimal number 559:
- [0101 0101 1001]<sub>BCD</sub>**
  - [0101 0001 1010]
  - [0101 1001 1001]
  - [1001 1010 0101]
27. \_\_\_\_\_ are the codes that represent alphabetic characters, punctuation marks and other special characters:
- Alphanumeric codes**
  - ASCII codes
  - EBCDIC codes
  - All of these
28. Abbreviation ASCII stands for:
- American standard code for information interchange**
  - Abbreviation standard code for information interchange
  - Both
  - None of these
29. How many bit of ASCII code:
- 6
  - 7**
  - 5
  - 8
30. Which code used in transferring coded information from keyboards and to computer display and printers:
- ASCII**
  - EBCDIC
  - Both
  - None of these
31. Which code used to represent numbers, letters, punctuation marks as well as control characters:
- ASCII**
  - EBCDIC
  - Both
  - None of these
32. abbreviation EBCDIC stand for:
- Extended binary coded decimal interchange code**
  - External binary coded decimal interchange code
  - Extra binary coded decimal interchange code
  - None of these
33. How many bit of EBCDIC code:
- 7
  - 8**
  - 5
  - 9
34. Which code the decimal digits are represented by the 8421 BCD code preceded by 1111:
- ASCII
  - EBCDIC**
  - Both
  - None of these

35. \_\_\_\_\_ has the property that corrupting or garbling a code word will likely produce a bit string that is not a code word:
- Error deleting codes
  - Error detecting codes**
  - Error string codes
  - None of these
36. Which is method used most simple and commonly:
- Parity check method**
  - Error detecting method
  - Both
  - None of these
37. Which is the method of parity:
- Even parity method
  - Odd parity method
  - Both**
  - None of these
38. The ability of a code to detect single errors can be stated in term of the \_\_\_\_\_:
- Concept of distance**
  - Even parity
  - Odd parity
  - None of these
39. The first n bit of a code word called \_\_\_\_\_ may be any of the  $2^n$  n-bit string minimum error bit:
- Information bits**
  - String bits
  - Error bits
  - All of these
40. A code in which the total number of 1s in a valid (n+1) bit code word is even, this is called an \_\_\_\_\_:
- Even parity code**
  - Odd parity code
  - Both
  - None of these
41. A code in which the total number of 1s in a valid (n+1)bit code word is odd and this code is called an \_\_\_\_\_:
- Error detecting code
  - Even parity code
  - Odd parity code**
  - None of these
42. a code is simply a subset of the vertices of the \_\_\_\_\_:
- n bit
  - n cube**
  - n single
  - n double
43. Which method is used to detect double errors and pinpoint erroneous bits:
- Even parity method
  - Odd parity method
  - Check sum method**
  - All of these
44. A code that is used to correct error is called an \_\_\_\_\_:
- Error detecting code
  - Error correcting code**
  - Both
  - None of these
45. A received \_\_\_\_\_ with a bit error will be closer to the originally transmitted code word than to any other code word:
- Code word
  - Non code word**
  - Decoding
  - All of these
46. Which code word was originally transmitted to produce a received word is called:
- Non code word
  - Code word
  - Decoding**
  - None of these
47. The hardware that does this is an \_\_\_\_\_:
- Error detecting decoder
  - Error correcting decoder**
  - Both
  - None of these
48. Hamming codes was developed in \_\_\_\_\_:
- 1953
  - 1950**
  - 1945
  - 1956
49. \_\_\_\_\_ between two code words is defined as the number of bits that must be changed for one code to another:
- Hamming codes
  - Hamming distance**
  - Both
  - None of these
50. It is actually a method for constructing codes with a minimum distance of \_\_\_\_\_:
- 2
  - 4
  - 3**
  - 5

51. The bit position in a \_\_\_\_\_ can be numbered from 1 through  $2^i-1$ :
- Hamming code word**
  - Hamming distance word
  - Both
  - None of these
52. Each check bit is grouped with the information bits as specified by a \_\_\_\_\_:
- Parity check code
  - Parity check matrix**
  - Parity check bit
  - All of these
53. The pattern of groups that have odd parity called the \_\_\_\_\_ must match one of the of columns in the parity check matrix:
- Syndrome**
  - Dynodes
  - Both
  - None of these
54. Which are designed to interpret a specified number of instruction code:
- Programmer
  - Processors**
  - Instruction
  - Opcode
55. Which code is a string of binary digits:
- Op code
  - Instruction code**
  - Parity code
  - Operand code
56. The list of specific instruction supported by the CPU is termed as its \_\_\_\_\_:
- Instruction code
  - Parity set
  - Instruction set**
  - None of these
57. \_\_\_\_\_ is divided into a number of fields and is represented as a sequence of bits:
- instruction**
  - instruction set
  - instruction code
  - parity code
58. Which unit is necessary for the execution of instruction:
- Timing
  - Control
  - Both**
  - None of these
59. Which unit provide status , timing and control signal:
- Timing and control unit**
  - Memory unit
  - Chace unit
  - None of these
60. Which unit acts as the brain of the computer which control other peripherals and interfaces:
- Memory unit
  - Cache unit
  - Timing and control unit**
  - None of these
61. It contains the \_\_\_\_\_ stack for PC storage during subroutine calls and input/output interrupt services:
- Seven- level hardware
  - Eight- level hardware**
  - One- level hardware
  - Three- level hardware
62. Which unit works as an interface between the processor and all the memories on chip or off- chip:
- Timing unit
  - Control unit
  - Memory control unit**
  - All of these
63. The maximum clock frequency is \_\_\_\_\_:
- 45 MHZ
  - 50 MHZ**
  - 52 MHZ
  - 68 MHZ
64. \_\_\_\_\_ is given an instruction in machine language this instruction is fetched from the memory by the CPU to execute:
- ALU
  - CPU**
  - MU
  - All of these
65. Which cycle refers to the time period during which one instruction is fetched and executed by the CPU:
- Fetch cycle
  - Instruction cycle**
  - Decode cycle
  - Execute cycle
66. How many stages of instruction cycle:
- 5
  - 6
  - 4**
  - 7

67. Which are stages of instruction cycle:  
 a. Fetch b. Decode  
 c. Execute  
 d. Derive effective address of the instruction  
 e. **All of these**
68. Which instruction are 32 bits long , with extra 16 bits:  
 a. **Memory reference instruction**  
 b. Memory reference format  
 c. Both d. None of these
69. Which is addressed by sign extending the 16-bit displacement to 32-bit:  
 a. Memory address **b. Effectivememory address**  
 c. Both a and b d. None of these
70. Which are instruction in which two machine cycle are required:  
 a. Instruction cycle  
 b. **Memory reference instruction**  
 c. Both d. None of these
71. Which instruction are used in multithreaded parallel processor architecture:  
 a. **Memory reference instruction**  
 b. Memory reference format  
 c. Both d. None of these
72. Which instruction are arranged as per the protocols of memory reference format of the input file in a simple ASCII sequence of integers between the range 0 to 99 separated by spaces without formatted text and symbols:  
 a. **Memory reference instruction**  
 b. Memory reference format  
 c. Both  
 d. None of these
73. \_\_\_\_\_ is an external hardware event which causes the CPU to interrupt the current instruction sequence:  
 a. Input interrupt b. Output interrupt  
 c. **Both** d. None of these
74. ISR stand for:  
 a. Interrupt save routine  
 b. **Interrupt service routine**  
 c. Input stages routine  
 d. All of these
75. Which interrupt services save all the register and flags:  
 a. Save interrupt  
 b. **Input/output interrupt**  
 c. Service interrupt  
 d. All of these
76. IRET stand for:  
 a. Interrupt enter  
 b. **Interrupt return**  
 c. Interrupt delete  
 d. None of these
77. Which are benefit of input/output interrupt:  
 a. It is an external analogy to exceptions  
 b. The processor initiates and perform all I/O operation  
 c. The data is transferred into the memory through interrupt handler  
 d. **All of these**
78. Which are the not causes of the interrupt:  
 a. In any single device  
 b. In processor poll devices  
 c. **It is an external analogy to exception**  
 d. None of these
79. Which are the causes of the interrupt:  
 a. In any single device  
 b. In processor poll devices  
 c. In a device whose ID number is stored on the address bus **d. All of these**
80. Which are the functioning of I/O interrupt:  
 a. The processor organizes all the I/O operation for smooth functioning  
 b. After completing the I/O operation the device interrupt the processor  
 c. Both d. None of these
81. \_\_\_\_\_ with which computers perform is way beyond human capabilities:  
 a. **Speed** b. Accuracy  
 c. Storage d. Versatility
82. \_\_\_\_\_ of a computer is consistently:  
 a. Speed **b. Accuracy**  
 c. Storage d. Versatility
83. GIGO stand for:  
 a. **Garbage-in-garbage-out**  
 b. Garbage-in garbage-occur  
 c. Both d. None of these
84. How many basic operations of versatility:  
 a. 5 b. 6 **c. 4** d. 7
85. Which are the operation of versatility:  
 a. exchange of information with the outside world via I/O device  
 b. Transfer of data internally with in the central processing unit  
 c. Performs of the basic arithmetic operations  
 d. **All of these**



86. \_\_\_\_\_ of information in a human brain and a computer happens differently:  
 a. Intelligence      **b. Storage**  
 c. Versatility      d. Diligence
87. Which are the basic operation for converting:  
 a. Inputting b. Storing c. Processing  
 d. Outputting e. Controlling  
**f. All of these**
88. The control unit and arithmetic logic unit are know as the \_\_\_\_\_:  
 a. Central program unit      **b. CPU**  
 c. Central primary unit      d. None
89. Which unit is comparable to the central nervous system in the human body:  
 a. Output unit      **b. Control unit**  
 c. Input unit      d. All of these
90. \_\_\_\_\_ of the primary memory of the computer is limited:  
**a. Storage capacity** b. Magnetic disk  
 c. Both      d. None of these
91. Information is handled in the computer by \_\_\_\_\_:  
 a. Electrical digit      **b. Electrical component**  
 c. Electronic bit      d. None of these
92. 0 and 1 are know as \_\_\_\_\_:  
 a. Byte      **b. Bit** c. Digits d. Component
93. 0 and 1 abbreviation for:  
**a. Binary digit** b. Octal digit  
 c. Both      d. None of these
94. How many bit of nibble group:  
 a. 5 **b. 4** c. 7 d. 8
95. How many bit of bytes:  
 a. 3 b. 4 c. 6 **d. 8**
96. Which is the most important component of a digit computer that interprets the instruction and processes the data contained in computer programs:  
 a. MU b. ALU **c. CPU** d. PC
97. Which part work as a the brain of the computer and performs most of the calculation:  
 a. MU      b. PC c. ALU **d. CPU**
98. Which is the main function of the computer:  
 a. Execute of programs  
**b. Execution of programs**  
 c. Both  
 d. None of these
99. How many major component make up the CPU:  
 a. 4 **b. 3** c. 6 d. 8
100. Which register holds the current instruction to be executed:  
**a. Instruction register**  
 b. Program register  
 c. Control register  
 d. None of these
101. Which register holds the next instruction to be executed:  
 a. Instruction register  
 b. Program register  
**c. Program control register**  
 d. None of these
102. Each instruction is also accompanied by a \_\_\_\_\_:  
 a. Microprocessor  
**b. Microcode**  
 c. Both  
 d. None of these
103. Which are microcomputers commonly used for commercial data processing, desktop publishing and engineering application:  
 a. Digital computer  
**b. Personal computer**  
 c. Both  
 d. None of these
104. Which microprocessor has the control unit, memory unit and arithmetic and logic unit:  
**a. Pentium IV processor**  
 b. Pentium V processor  
 c. Pentium III processor  
 d. None of these
105. The processing speed of a computer depends on the \_\_\_\_\_ of the system:  
**a. Clock speed**  
 b. Motorola  
 c. Cyrix  
 d. None of these
106. Which microprocessor is available with a clock speed of 1.6 GHZ:  
 a. Pentium III      b. Pentium II  
**c. Pentium IV**      d. All of these
107. Which processor are used in the most personal computer:  
**a. Intel corporation's Pentium**  
 b. Motorola corporation's  
 c. Both  
 d. None of these

**Computer System Architecture MCQ 03**

1. \_\_\_\_\_ is the first step in the evolution of programming languages:
  - a. machine language
  - b. assembly language**
  - c. code language
  - d. none of these
2. Mnemonic refers to:
  - a. Instructions
  - b. Code
  - c. Symbolic codes**
  - d. Assembler
3. Mnemonic represent:
  - a. Operation codes**
  - b. Strings
  - c. Address
  - d. None of these
4. To represent addresses in assembly language we use:
  - a. String characters**
  - b. Arrays
  - c. Structure
  - d. Enum
5. Assembler works to convert assembly language program into machine language :
  - a. Before the computer can execute it**
  - b. After the computer can execute it
  - c. In between execution
  - d. All of these
6. \_\_\_\_\_ generation computers use assembly language:
  - a. First generation
  - b. Third generation
  - c. second generation**
  - d. fourth generation
7. Assembly language program is called:
  - a. Object program
  - b. Source program**
  - c. Oriented program
  - d. All of these
8. To invoke assembler following command are given at command line:
  - a. \$ hello.s -o hello.o
  - b. \$as hello.s -o o
  - c. \$ as hello -o hello.o
  - d. \$ as hello.s -o hello.o**
9. By whom address of external function in the assembly source file supplied by \_\_\_\_\_ when activated:
  - a. Assembler
  - b. Linker**
  - c. Machine
  - d. Code
10. An \_\_\_\_\_ -o option is used for:
  - a. Input file
  - b. External file
  - c. Output file**
  - d. None of these
11. The assembler translates isomorphically \_\_\_\_\_ mapping from mnemonic in these statements to machine instructions:
  - a. 1:1**
  - b. 2:1
  - c. 3:3
  - d. 4:1
12. Assembler works in \_\_\_\_\_ phases:
  - a. 1
  - b. 3
  - c. 2**
  - d. 4
13. The assembler in first pass reads the program to collect symbols defined with offsets in a table \_\_\_\_\_:
  - a. Hash table
  - b. Symbol table**
  - c. Both a & b
  - d. None of these
14. In second pass, assembler creates \_\_\_\_\_ in binary format for every instruction in program and then refers to the symbol table to giving every symbol an \_\_\_\_\_ relating the segment.
  - a. Code and program
  - b. Program and instruction
  - c. Code and offset**
  - d. All of these
15. which of the 2 files are created by the assembler:
  - a. List and object file**
  - b. Link and object file
  - c. Both a & b
  - d. None of these
16. In which code is object file is coded:
  - a. Link code
  - b. Decimal code
  - c. Assembly code
  - d. Binary code**

17. which type of errors are detected by the assembler:
- syntax error**
  - logical error
  - run time error
  - none of these
18. MOVE AX BX in this LINES OF CODE what type of error is declared:
- Undeclared identifier MOVE**
  - undeclared identifier AX
  - Accept as a command
  - Not look in symbol table
19. In given lines of code MOV AX,BL have different type of operands according to assembler for 8086 architecture these identifiers must be of:
- Different type only in byte
  - Same type either in word or byte**
  - Both a & b
  - None of these
20. What type of errors are not detected by assemblers:
- Syntax error
  - Run time error
  - Logical error**
  - All of these
21. \_\_\_\_\_ serves as the purpose of documentation only:
- List**
  - object
  - link
  - code
22. An assembler is a utility program that performs:
- Isometric translation
  - Isomorphic translation**
  - Isochoric translation
  - None of these
23. Assemblers are of 2 types:
- 1 pass
  - 2 pass
  - both a & b**
  - none of these
24. CP/CMS assembly language was written in \_\_\_\_\_ assembler:
- S/340
  - S-350
  - S/320
  - S/360**
25. ASM-H widely used \_\_\_\_\_ assembler:
- S/370**
  - S/380
  - S/390
  - S/360
26. Assembler is a \_\_\_\_\_:
- Interpreter
  - Translator**
  - Exchanger
  - None of these
27. A \_\_\_\_\_ processor controls repetitious writing of sequence:
- Macro**
  - Micro
  - Nano
  - All of these
28. IBM-360 type language is example which supporting \_\_\_\_\_ language:
- Micro
  - Macro**
  - Both a & b
  - None of these
29. \_\_\_\_\_ is attached to using macro instruction definition:
- Name**
  - Definition
  - Identifier
  - All of these
30. END of macro definition by:
- NAME
  - MEND**
  - DATA
  - MEMORY
31. Process of replacing the sequence of lines of codes is known as:
- Expanding die macro**
  - Expanding tri macro
  - Tetra macro
  - None of these
32. A program that links several programs is called:
- Linker**
  - Loader
  - Translator
  - None of these
33. \_\_\_\_\_ address is not assigned by linker:
- Absolute**
  - Relative
  - Both a & b
  - None of these

34. \_\_\_\_\_ address is provided by linker to modules linked together that starting from \_\_\_\_\_:
- Absolute and 0
  - Relative and 0**
  - Relative and 1
  - Relative and 3
35. A linker is also known as:
- Binder
  - Linkage editor
  - Both a & b**
  - None of these
36. Loading is \_\_\_\_\_ with the task of storage management of operating system and mostly performed after assembly:
- Bound**
  - Expanded
  - Overlaps
  - All of these
37. \_\_\_\_\_ contain library program have to be indicated to the loader:
- Externally defined**
  - Internally defined
  - Executable file
  - All of these
38. It is the task of the \_\_\_\_\_ to locate externally defined symbols in programs, load them in to memory by placing their \_\_\_\_\_ of symbols in calling program:
- Loader and name
  - Linker and values
  - Linker and name
  - Loader and values**
39. Linker creates a link file containing binary codes and also produces \_\_\_\_\_ containing address information on linked files:
- Link map**
  - Map table
  - Symbol map
  - None of these
40. how many types of entities contained by assembler to handle program:
- 4
  - 2
  - 3**
  - 5
41. which of the following are types of assembler entities:
- Absolute entities
  - Relative entities
  - Object program
  - All of these**
42. \_\_\_\_\_ have addresses where instructions are stored along with address of working storage:
- Relative entities**
  - Absolute entities
  - Both a & b
  - None of these
43. Absolute entities are \_\_\_\_\_ whom value signify storage locations that are independent of resulting machine code:
- Numeric constants
  - String constants
  - Fixed addresses
  - Operation codes
  - All of these**
44. A module contains machine code with specification on \_\_\_\_\_:
- Relative addresses**
  - Absolute addresses
  - Object program
  - None of these
45. After actual locations for main storage are known, a \_\_\_\_\_ adjusts relative addresses to these actual locations:
- Relocating loader**
  - Locating loader
  - Default loader
  - None of these
46. If there is a module from single source-language only that does not contain any external references, it doesn't need a linker to load it and is loaded \_\_\_\_\_:
- Indirectly
  - Directly**
  - Extending
  - None of these
47. Modern assemblers for RISC based architectures make optimization of instruction scheduling to make use of CPU \_\_\_\_\_ efficiently:
- Pipeline**
  - Without pipeline
  - Both a & b
  - None of these

48. which are of the following modern assemblers:
- MIPS
  - Sun SPARC
  - HP PA-RISC
  - x86(x64)
  - all of these**
49. How many types of loop control structures in C language:
- 4
  - 5
  - 2
  - 3**
50. Types of loop control statements are:
- For loop
  - While loop
  - Do-while loop
  - All of these**
51. <Initial value> is \_\_\_\_\_ which initializes the value of variable:
- Assignment expression**
  - Condition value
  - Increment/decrement
  - None of these
52. The format “%8d” is used to print \_\_\_\_\_ values in a line:
- 11
  - 10**
  - 9
  - 12
53. <Condition> is a \_\_\_\_\_ expression which will have value true or false:
- Relational
  - Logical
  - Both a & b**
  - None of these
54. <Increment> is the \_\_\_\_\_ value of variable which will be added every time:
- Increment**
  - Decrement
  - Expanding
  - None of these
55. \_\_\_\_\_ is the statement block of for loop lies inside block of another for loop:
- Nested for loop**
  - Nested while loop
  - Nested do-while loop
  - None of these
56. SPARC stands for:
- Scalable programmer architecture
  - Scalable processor architecture**
  - Scalable point architecture
  - None of these
57. Full form of MIPS assembler is:
- Microprocessor without interlocked pipeline stage**
  - Microprocessor with interlocked pipeline stage
  - Both a & b
  - None of these
58. \_\_\_\_\_ statement block is executed atleast once for any value of the condition:
- For statement
  - Do-while statement**
  - While statement
  - None of these
59. \_\_\_\_\_ statement is an unconditional transfer of control statement:
- Goto**
  - Continue
  - Switch
  - All of these
60. In Goto statement the place to which control is transferred is identified by a statement \_\_\_\_\_:
- Label**
  - Display
  - Break
  - None of these
61. The continue statement is used to transfer the control to the \_\_\_\_\_ of a statement block in a loop:
- End
  - Beginning**
  - Middle
  - None of these
62. The \_\_\_\_\_ statement is used to transfer the control to the end of statement block in a loop:
- Continue
  - Break**
  - Switch
  - Goto
63. \_\_\_\_\_ function is used to transfer the control to end of a program which uses one argument( ) and takes value is zero for \_\_\_\_\_ termination and non-zero for \_\_\_\_\_ termination:
- Exit(), normal, abnormal**
  - Break, normal, abnormal
  - Both a & b
  - None of these

64. To design a program it requires \_\_\_\_\_:
- Program specification**
  - Code specification
  - Instruction specification
  - Problem specification
65. Testing helps to ensure \_\_\_\_\_ of the program for use within a system:
- Quality, accuracy and except
  - Quality, accuracy and acceptance**
  - Design, assurance and acceptance
  - Quality, accuracy and development
66. An unstructured program uses a \_\_\_\_\_ approach to solve problems:
- Linear
  - Top down
  - Both a & b**
  - None of these
67. In a complex program, the \_\_\_\_\_ overlaps:
- Branching**
  - Condition
  - Both a & b
  - None of these
68. How many structures structured programs are written:
- 3**
  - 2
  - 1
  - 6
69. following are structured programs written in simple structures:
- Sequence
  - Selection
  - Iteration
  - All of these**
70. Iteration also called:
- Repetition**
  - Straight
  - Selection
  - Sequence
71. In \_\_\_\_\_ instructions are followed one after the other in the preset order in which they appear within program:
- Sequence**
  - Selection
  - Break
  - Iteration
72. \_\_\_\_\_ means that one of two alternative sequences of instruction is chosen based on logical condition:
- Sequence
  - Selection**
  - Repetition
  - None of these
73. \_\_\_\_\_ is sequence of instructions is executed and repeated any no. of times in loop until logical condition is true:
- Iteration
  - Repetition
  - Both a & b**
  - None of these
74. A \_\_\_\_\_ is a small program tested separately before combining with final program:
- Module**
  - Block
  - selection
  - none of these
75. \_\_\_\_\_ uses various symbols to represent function within program and is \_\_\_\_\_ representation:
- Flowchart, pictorial**
  - Algorithm, pictorial
  - Pictorial, flowchart
  - None of these
76. \_\_\_\_\_ Avoid crossing flow lines:
- Flowchart**
  - Algorithm
  - Both a & b
  - None of these
77. A flow chart is drawn from top to bottom and \_\_\_\_\_:
- Right to left
  - Only right
  - Left to right**
  - Only left
78. Flowchart that exceed page should be properly linked using \_\_\_\_\_ to portions of flowchart on different pages:
- Connectors**
  - Interconnections
  - Connections
  - None of these

79. \_\_\_\_\_ is useful to prepare detailed program documentation:
- Flowchart**
  - Algorithm
  - Both a & b
  - None of these
80. Pseudo means:
- Imitation**
  - Imitate
  - In imitation
  - None of these
81. Preparing the pseudocode requires \_\_\_\_\_ time than drawing flowchart:
- Less**
  - More
  - Optimum
  - None of these
82. There is \_\_\_\_\_ standard for preparing pseudocode instructions:
- No**
  - 4
  - 2
  - 6
83. \_\_\_\_\_ are used to translate high level language instructions to a machine code:
- Translators
  - Interpreters
  - Compilers**
  - None of these
84. The compiler \_\_\_\_\_ translate a program code with any syntax error:
- Can
  - Cannot**
  - Without
  - None of these
85. Before checking the program for errors in translating code into machine language the high level language code is loaded into \_\_\_\_\_:
- Register
  - Memory**
  - Data
  - CPU
86. After compilation of the program ,the operating system of computer activates:
- Loader
  - Linker**
  - Compiler
  - None of these
87. The linker has utilities needed for \_\_\_\_\_ within the translated program:
- Input
  - Output
  - Processing
  - All of these**
88. Flowchart is a \_\_\_\_\_ representation of an algorithm:
- Symbolic
  - Diagrammatic
  - Both a & b**
  - None of these
89. In flow chart symbols the \_\_\_\_\_ operation represents the direction of flow:
- Connector
  - Looping
  - Arrows**
  - Decision making
90. Which register is memory pointer:
- Program counter**
  - Instruction register
  - Stack pointer
  - Source index
91. How many approaches are used to design control unit:
- 2**
  - 3
  - 4
  - 5
92. Which are the following approaches used to design control unit:
- Hardwired control
  - Microprogrammed control
  - Both a & b**
  - None of these
93. Cache memory is located between main memory and \_\_\_\_\_:
- CPU**
  - Memory
  - Both a & b
  - None of these

94. \_\_\_\_\_arrow represents the value obtained by evaluating right side expression/variable to the left side variable:
- Forth
  - Inbetween
  - Back**
  - None of these
95. A \_\_\_\_\_is written as separate unit, apart from main and called whenever necessary:
- Subroutine**
  - Code
  - Block
  - None of these
96. \_\_\_\_\_uses the stack to store return address of subroutine:
- CPU
  - Microprocessor**
  - register
  - memory
97. A subroutine is implemented with 2 associated instructions:
- CALL
  - RETURN
  - Both a & b**
  - None of these
98. Call instruction is written in the \_\_\_\_\_program:
- Main**
  - Procedures
  - Program
  - Memory
99. Return instruction is written in \_\_\_\_\_to written to main program:
- Subroutine**
  - Main program
  - Both a & b
  - None of these
100. When subroutine is called contents of program counter is location address of \_\_\_\_\_instruction following call instruction is stored on \_\_\_\_\_and program execution is transferred to \_\_\_\_\_address:
- Non executable, pointer and subroutine
  - Executable, Stack and Main program
  - Executable, Queue and Subroutine
  - Executable, Stack and Subroutine**
101. A subroutine called by another subroutine is called:
- Nested**
  - For loop
  - Break
  - Continue
102. The extent nesting in subroutine is limited only by:
- Number of available Stack locations**
  - Number of available Addressing locations
  - Number of available CPU locations
  - Number of available Memory locations
103. Which are of the following instructions of hardware subroutines:
- SCAL
  - SXIT
  - Both a & b**
  - None of these
104. Importance in local variable and index registers in subroutine does \_\_\_\_\_:
- Alter
  - Not alter**
  - Both a & b
  - None of these
105. Markers in subroutine cannot be accepted as limits whereas this markers stands for:
- Top of stack**
  - Bottom of stack
  - Middle of stack
  - All of these
106. Subroutines are placed in identical section to caller so that SCAL and SXIT \_\_\_\_\_overpass division limits:
- Don't**
  - Does
  - Cross
  - By
107. \_\_\_\_\_subroutine declaration come after procedure announcement:
- Global**
  - Local
  - Both a & b
  - None of these
108. subroutines are invoked by using their\_\_\_\_\_in a subroutine call statement and replacing formal parameters with\_\_\_\_\_parameters:
- Identifier and formal
  - Identifier and actual**
  - Expression and arguments
  - None of these



109. Parameters can be stacked by \_\_\_\_\_ just as with procedures:
- Asterisk(\*)**
  - Arrow
  - Line
  - Pipeline
110. The subroutines are determined by functioning of \_\_\_\_\_ instructions:
- SCAL and SXIT**
  - only SCAL
  - only SXIT
  - none of these
111. Call is \_\_\_\_\_ subroutine call:
- Conditional
  - Unconditional**
  - Both a & b
  - None of these
112. A flag is a \_\_\_\_\_ that keep track of a changing condition during computer run:
- Memory
  - Register
  - Controller
  - None of these
113. When a subroutine is \_\_\_\_\_ the parameters are loaded onto the stack and SCAL is executed:
- Executed
  - Invoked**
  - Ended
  - Started
114. Subroutine is called \_\_\_\_\_:
- In Same program
  - In external program
  - Both a & b**
  - None of these
115. If internal subroutine is called global data is used to pass values defining parameters between \_\_\_\_\_ program and defined \_\_\_\_\_:
- Main and subroutine**
  - Local and subroutine
  - Global and subroutine
  - Global and main
116. In what type of subroutine actual parameters are passed through the main program to formal parameters in the related subroutine:
- Internal
  - External**
  - Both a & b
  - None of these
117. By defining the \_\_\_\_\_ register as last in first out stack the sequence can handle nested subroutines:
- S
  - J
  - R**
  - T
118. The \_\_\_\_\_ stack can be 4-word memory addressed by 2 bits from an up/down counter known as the stack pointer:
- FIFO
  - PIPO
  - SISO
  - LIFO**
119. getchar :: IO char in this given function what is indicated by IO char:
- when getchar is invoked it returns a character**
  - when getchar is executed it returns a character
  - both a & b
  - none of these
120. If we define putchar function in putchar :: char -> IO ( ) syntax than character input as an argument and returns \_\_\_\_\_:
- Useful value
  - Get output
  - Get no output**
  - None of these
121. The front panel display provides lights as green LED represent \_\_\_\_\_ and red LED represent \_\_\_\_\_ for device programmer who writes input/output basic:
- Busy and Error**
  - Error and Busy
  - Busy and Busy
  - Error and Error
122. The input data for processing uses the standard input device which by default is a \_\_\_\_\_:
- Mouse
  - Scanner
  - Keyboard**
  - Monitor

123. The processed data is sent for output to standard \_\_\_\_\_ device which by default is computer screen:

- a. Input
- b. Output**
- c. Both a & b
- d. None of these

124. Each instruction is executed by set of micro operations termed as:

- a. Micro instructions**
- b. Mini instructions
- c. Both a & b
- d. None of these

125. For each micro operation the control unit generates set of \_\_\_\_\_ signals:

- a. Control**
- b. Address
- c. Data
- d. None of these

126. Sequence of microinstructions is termed as micro program or \_\_\_\_\_:

- a. Hardware
- b. Software
- c. Firmware**
- d. None of these

127. The micro program is an \_\_\_\_\_ written in microcode and stored in firmware which is also referred as \_\_\_\_\_:

- a. Interpreter and control memory**
- b. Translator and control store
- c. Translator and control memory
- d. Interpreter and Translator

128. Compared to hardware, firmware is \_\_\_\_\_ to design micro programmed organization:

- a. Difficult
- b. Easier**
- c. Both a & b
- d. None of these

129. Compared to software, firmware is \_\_\_\_\_ to write:

- a. Easier
- b. Difficult**
- c. Mediator
- d. Optimum

130. \_\_\_\_\_ program converts machine instructions into control signals:

- a. Control memory program
- b. Control store program
- c. Both a & b**
- d. Only memory

131. \_\_\_\_\_ who coined the term micro program in 1951:

- a. T.V. Wilkes
- b. M.V. Wilkes**
- c. S.V. Wilkes
- d. D.V. Wilkes

132. \_\_\_\_\_ what is full form of EDSAC:

- a. Electronic delay source accumulator calculator
- b. Electronic delay storage automatic code
- c. Electronic destination source automatic calculator
- d. Electronic delay storage automatic calculator**

133. Who led to development of read –only magnetic core matrix for use in control unit of small computer at IBM's laboratory:

- a. John Fairclough's**
- b. Johny fairclough
- c. Mr. Redcliff
- d. M.V. Wilkes

134. From 1961-1964 John fairclough's research played an important role to pursue full range of compatible computers as system:

- a. System/360**
- b. System/460
- c. System/560
- d. System/780

135. Each microinstructions cycle is made of 2 parts:

- a. Fetch
- b. Execute
- c. Code
- d. Both a & b**

136. One of use of microprogramming to implement \_\_\_\_\_ of processor in Intel 80x86 and Motorola 680x0 processors whose instruction set are evolved from 360 original:

- a. Control structure
- b. Without control
- c. Control unit**
- d. Only control

137. The function of these microinstructions is to issue the micro orders to \_\_\_\_\_:
- CPU**
  - Memory
  - Register
  - Accumulator
138. Micro-orders generate the \_\_\_\_\_ address of operand and execute instruction and prepare for fetching next instruction from the main memory:
- Physical
  - Effective**
  - Logical
  - all of above
139. Which of the following 2 task are performed to execute an instruction by MCU:
- Microinstruction execution
  - Microinstruction sequencing
  - Both a & b**
  - None of these
140. What is the purpose of microinstruction executions:
- Generate a control signal
  - Generate a control signal to compile
  - Generate a control signal to execute**
  - All of these
141. Which microinstruction provide next instruction from control memory:
- Microinstruction execution
  - Microinstruction Buffer
  - Microinstruction decoder
  - Microinstruction Sequencing**
142. Which are the following components of microprogramed units to implement control process:
- Instruction register
  - Microinstruction address generation
  - Control store microprogram memory
  - Microinstruction Buffer
  - Microinstruction decoder
  - All of these**
143. Microcodes are stored as firmware in \_\_\_\_\_:
- Memory chips**
  - Registers
  - accumulators
  - none of these
144. A control memory is \_\_\_\_\_ stored in some area of memory:
- Control instruction**
  - Memory instruction
  - Register instruction
  - None of these
145. A computer having writable control memory is known as \_\_\_\_\_:
- Static micro programmable
  - Dynamic micro programmable**
  - Both a & b
  - None of these
146. The control memory contains a set of words where each word is:
- Microinstruction**
  - Program
  - Sets
  - All of these
147. During program execution content of main memory undergo changes and, but control memory has \_\_\_\_\_ microprogram:
- Static
  - Dynamic
  - Compile time
  - Fixed**
148. What happens if computer is started :
- It executes "CPU" microprogram which is sequence of microinstructions stored in ROM
  - It executes "code" microprogram which is sequence of microinstructions stored in ROM
  - It executes "boot" microprogram which is sequence of microinstructions stored in ROM**
  - It executes "strap loader" microprogram which is sequence of microinstructions stored in ROM
149. Control memory is part of \_\_\_\_\_ that has addressable storage registers and used as temporary storage for data:
- ROM
  - RAM**
  - CPU
  - Memory
150. How many modes the address in control memory are divided:
- 2**
  - 3
  - 5
  - 7
151. which of the following is interrupt mode:
- Task mode
  - Executive mode**
  - Both a & b
  - None of these

152. Mode of addresses in control memory are:
- Executive mode
  - Task mode
  - Both a & b**
  - None of these
153. Addresses in control memory is made by \_\_\_\_\_ for each register group:
- Address select logic**
  - Data select logic
  - Control select logic
  - All of these
154. There are how many register groups in control memory:
- 3
  - 5**
  - 6
  - 8
155. What type of circuit is used by control memory to interconnect registers:
- Data routing circuit**
  - Address routing circuit
  - Control routing circuit
  - None of the these
156. Which memory is used to copy instructions or data currently used by CPU:
- Main memory
  - Secondary memory
  - Cache memory**
  - None of these
157. Copy of instruction in cache memory is known as:
- Execution cache
  - Data cache
  - Instruction cache**
  - All of these
158. Copy of data in cache memory is called:
- Data cache**
  - Execution cache
  - Address cache
  - Control cache
159. What are 2 advantages of cache memory:
- Reduction of average access time for CPU memory
  - Reduction of bandwidth of available memory of CPU
  - Both a & b**
  - None of these
160. On what method search in cache memory used by the system:
- Cache directing
  - Cache mapping**
  - Cache controlling
  - Cache invalidation
161. \_\_\_\_\_ process starts when a cpu with cache refers to a memory:
- Main memory
  - External memory
  - Cache**
  - All of these
162. When cache process starts hit and miss rate defines in cache directory:
- during search reads**
  - during search writes
  - during replace writes
  - during finding writes
163. In cache memory hit rate indicates:
- Data from requested address is not available
  - Data from requested address is available**
  - Control from requested address is available
  - Address from requested address is not available
164. In cache memory miss rate indicates:
- Availability of requested data
  - Availability of requested address
  - Non-Availability of requested data**
  - Non-Availability of requested address
165. Which 3 areas are used by cache process:
- Search, updating, invalidation**
  - Write, updating, invalidation
  - Search, read, updating
  - Invalidation, updating, requesting
166. Updating writes to cache data and also to \_\_\_\_\_:
- Directories**
  - Memory
  - Registers
  - Folders
167. Invalidation writes only to \_\_\_\_\_ and erases previously residing address in memory:
- Folders
  - Memory
  - Directory**
  - Files

168. \_\_\_\_\_ machine instruction creates branching to some specified location in main memory if result of last ALU operation is Zero or Zero flag is set:
- Branch on One
  - Branch on Three
  - Branch on Nine
  - Branch on Zero**
169. Full form of CAR:
- Control address register**
  - Content address register
  - Condition accumulator resource
  - Code address register
170. Two types of microinstructions are:
- Branching
  - Non-branching
  - Both a & b**
  - None of these
171. Which are 3 ways to determine address of next micro instruction to be executed:
- Next sequential address
  - Branching
  - Interrupt testing
  - All of these**
172. Branching can be \_\_\_\_\_:
- Conditional
  - Unconditional
  - Both a & b**
  - None of these
173. In which branching condition is tested which is determined by status bit of ALU:
- Unconditional
  - Conditional**
  - Both a & b
  - None of these
174. \_\_\_\_\_ which branch is achieved by fixing status bit that output of multiplexer is always one:
- Unconditional**
  - Conditional
  - Looping
  - All of these
175. Which register is used to store addresses of control memory from where instruction is fetched:
- MAR
  - BAR
  - CAR**
  - DAR
176. Control ROM is the control memory that holds:
- Control words**
  - Memory words
  - Multiplexers
  - Decoders
177. Opcode is the machine instruction obtained from decoding instruction stored in:
- Stack pointer
  - Address pointer
  - Instruction register**
  - Incrementer
178. Branch logic determines which should be adopted to select the next \_\_\_\_\_ value among possibilities:
- CAR**
  - GAR
  - HAR
  - TAR
179. \_\_\_\_\_ generates CAR+1 as possibility of next CAR value:
- Decrementer
  - Incrementer**
  - Postfix
  - Prefix
180. \_\_\_\_\_ used to hold return address for operations of subroutine call branch:
- TBR
  - HDR
  - SDR
  - SBR**
181. Which of following 2 types of computer system considered by micro programmed unit:
- Micro level computers
  - Machine level computers
  - Both a & b**
  - None of these
182. Following are the components of micro programmed control unit:
- Subroutine register
  - Control address register
  - Memory Of 128 words with 20 bits per words
  - All of these**
183. Various machine level components are:
- Address register
  - Program counter
  - Data register
  - Accumulator register
  - Memory of 2K, 16 bits/word RAM
  - Multiplexers
  - All of these**

184. Data transfers are done using:  
 a. **Multiplexer switching**  
 b. Demultiplexer switching  
 c. Adder switching  
 d. Subtractor switching
185. PC can be loaded from\_\_\_\_\_  
 a. BR  
 b. CR  
 c. **AR**  
 d. TR
186. Which functions are performed by CU:  
 a. Data exchange b/w CPU and memory or I/O modules  
 b. External operations  
 c. Internal operations inside CPU  
 d. **Both a & c**
187. Which are internal operations inside CPU:  
 a. Data transfer b/w registers  
 b. Instructing ALU to operate data  
 c. Regulation of other internal operations  
 d. **All of these**
188. How many paths taken by movement of data in CU:  
 a. 3  
 b. 4  
 c. 5  
 d. 2
189. 2 data paths in CU are:  
 a. Internal data paths  
 b. External data paths  
 c. **Both a & b**  
 d. None of these
190. \_\_\_\_\_ is the data paths link CPU registers with memory or I/O modules:  
 a. **External data paths**  
 b. Internal data paths  
 c. Boreal data paths  
 d. Exchange data paths
191. \_\_\_\_\_ is data paths there is movement of data from one register to another or b/w ALU and a register:  
 a. External                      b. Boreal  
 c. **Internal**                      d. Exchange
192. Which is the input of control unit:  
 a. Master clock signal  
 b. Instruction register              c. Flags  
 d. Control signals from bus  
 e. **All of these**
193. If \_\_\_\_\_ flag is set then control unit issues control signals that causes program counter to be incremented by 1:  
 a. **Zero**  
 b. One  
 c. Three  
 d. Eight
194. Which control unit is implemented as combinational circuit in the hardware:  
 a. Microprogrammed control unit  
 b. **Hardwired control unit**  
 c. Blockprogrammed control unit  
 d. Macroprogrammed control unit
195. Microprograms are usually stored in:  
 a. **ROM**  
 b. RAM  
 c. SAM  
 d. SAN
196. Among them which is the faster control unit:  
 a. **Hardwired**  
 b. Microprogrammed  
 c. Both a & b  
 d. None of these
197. For CISC architecture \_\_\_\_\_ controllers are better:  
 a. **Microprogrammed**  
 b. Hardwired  
 c. Betterwired  
 d. None of these
198. Full form of FSM is:  
 a. **Finite state machine**  
 b. Fix state machine  
 c. Fun source metal  
 d. All of these
199. Rules of FSM are encoded in:  
 a. ROM  
 b. Random logic  
 c. Programmable logic array  
 d. **All of these**
200. In RISC architecture access to registers is made as a block and register file in a particular register can be selected by using:  
 a. Multiplexer  
 b. **Decoder**  
 c. Subtractor  
 d. Adder

201. Outputs of instruction/data path in CU are:
- Reg R/W
  - Load/Reg-Reg
  - ALU function select
  - Load control
  - Read control
  - IR Latch
  - JUMP/Branch/Next PC
  - All of these**
202. One last bit of control output is for control of state:
- Minor
  - Major**
  - Mixer
  - None of these
203. Following are 4 major states for 'load' are:
- Fetch
  - Decode
  - Memory
  - Write back
  - All of these**
204. Jump has 3 major states are:
- Fetch
  - Decode
  - Completed
  - All of these**
205. \_\_\_\_\_ state keeps track of position related to execution of an instruction:
- Major**
  - Minor
  - Both a & b
  - None of these
206. An instruction always starts with state \_\_\_\_\_:
- 1
  - 2
  - 3
  - 0**
207. Decoding of an instruction in RISC architecture means decision on working of control unit for:
- Remainder of instructions**
  - Divisor of instructions
  - Dividend of instructions
  - None
208. Which control is used during starting of instruction cycle:
- Write
  - Read**
  - R/W
  - None of these
209. \_\_\_\_\_ function select takes op code in IR translating to function of ALU and it may be compact binary code or one line per ALU:
- ALU**
  - CPU
  - Memory
  - Cache
210. \_\_\_\_\_ is dependent on instruction type in CU:
- Jump
  - Branch
  - NextPC
  - All of these**
211. \_\_\_\_\_ dependent on instruction and major state and also comes in starting of data fetch state as well as write back stage in CU:
- Register read
  - Register write
  - Register R/W**
  - All of these
212. \_\_\_\_\_ dependence over op-code in C:
- Load register
  - Load Reg/Reg**
  - Only Load
  - None of these
213. Full form of PLA in CU:
- Programmable Logic Array**
  - Programs Load Array
  - Programmable Logic Accumulator
  - all of these
214. Which are tasks for execution of CU or MCU:
- Microinstruction execution
  - Microinstruction sequencing
  - Both a & b**
  - None of these
215. Branching is implemented by depending on output of:
- CD**
  - RG
  - CC
  - CR
216. Who determine under what conditions the branching will occur and when:
- By combination of CD and BT
  - By combination of CD and BR**
  - By combination of CD and CR
  - By combination of TD and BR
217. The character U is used to indicate:
- Undefined transfers
  - Unfair transfers
  - Unconditional transfers**
  - All of these
218. Which field is used to requests for branching:
- DR
  - CR
  - TR
  - BR**
219. \_\_\_\_\_ which field is used to determine what type of transfer occurs:
- CR**
  - SR
  - BR
  - MR
220. Source statements consist of 5 fields in microinstruction source code are:
- Lable
  - Micro-ops
  - CD-spec
  - BR-spec
  - Address
  - All of these**

**Computer System Architecture MCQ 04**

1. Which is a type of microprocessor that is designed with limited number of instructions:
  - a. CPU
  - b. RISC**
  - c. ALU
  - d. MUX
2. Which unit is a pipeline system helps in speeding up processing over a non pipeline system:
  - a. CPU**
  - b. RISC
  - c. ALU
  - d. MUX
3. The group of binary bits assigned to perform a specified operation is known as:
  - a. Stack register
  - b. Control word**
  - c. Both
  - d. None
4. How many binary selection inputs in the control word:
  - a. 1
  - b. 7
  - c. 14**
  - d. 28
5. In control word three fields contain how many bits:
  - a. 1
  - b. 2
  - c. 3**
  - d. 4
6. Three fields contains three bits each so one field has how many bits in control word:
  - a. 2
  - b. 4
  - c. 5**
  - d. 6
7. How is selects the register that receives the information from the output bus:
  - a. Decoder**
  - b. Encoder
  - c. MUX
  - d. All of these
8. A bus organization for seven\_\_\_\_\_register:
  - a. ALU
  - b. RISC
  - c. CPU**
  - d. MUX
9. How many source register propagate through the multiplexers:
  - a. 1
  - b. 2**
  - c. 3
  - d. 4
10. How many bits of OPR select one of the operations in the ALU:
  - a. 2
  - b. 3
  - c. 4
  - d. 5**
11. five bits of OPR select one of the operation in the\_\_\_\_\_in control register:
  - a. CPU
  - b. RISC
  - c. ALU**
  - d. MUX
12. The OPR field has how many bits:
  - a. 2
  - b. 3
  - c. 4
  - d. 5**
13. In stack organization the insertion operation is known as\_\_\_\_\_:
  - a. Pop
  - b. Push**
  - c. Both
  - d. None
14. In stack organization the deletion operation is known as\_\_\_\_\_:
  - a. Pop**
  - b. Push
  - c. Both
  - d. None



15. A stack in a digital computer is a part of the\_:

- a. ALU
- b. CPU
- c. **Memory unit**
- d. None of these

16. In stack organization address register is known as the:

- a. Memory stack
- b. **Stack pointer**
- c. Push operation
- d. Pop operation

17. In register stack a stack can be organized by a \_\_\_\_\_number of register:

- a. Infinite number
- b. **Finite number**
- c. Both
- d. None

18. Which operation are done by increment or decrement the stack pointer:

- a. Push
- b. Pop
- c. **Both**
- d. None

19. In register stack a stack can be a finite number of\_\_:

- a. Control word
- b. **Memory word**
- c. Transfer word
- d. All of these

20. The stack pointer contains the address of the word that is currently on\_\_\_\_\_:

- a. **Top of the stack**
- b. Down of the stack
- c. Top and Down both
- d. None

21. In register stack items are removed from the stack by using the\_\_\_\_\_operation:

- a. Push
- b. **Pop**
- c. Both
- d. None

22. Which register holds the item that is to be written into the stack or read out of the stack:

- a. SR
- b. IR
- c. RR
- d. **DR**

23. In register stack the top item is read from the stack into:

- a. SR
- b. IR
- c. RR
- d. **DR**

24. In conversion to reverse polish notation the \_\_\_\_\_and\_\_\_\_\_operations are performed at the end:

- a. **Add and subtract**
- b. Subtract and multiplication
- c. Multiplication and subtract
- d. All of these

25. RPN stands for:

- a. **Reverse polish notation**
- b. Read polish notation
- c. Random polish notation
- d. None of these

26. Instruction formats contains the memory address of the\_\_\_\_\_:

- a. Memory data
- b. **Main memory**
- c. CPU
- d. ALU

27. In instruction formats instruction is represent by a \_\_\_\_\_ of bits:
- Sequence**
  - Parallel
  - Both
  - None
28. In instruction formats the information required by the \_\_\_\_\_ for execution:
- ALU
  - CPU**
  - RISC
  - DATA
29. The operation is specified by a binary code known as the \_\_\_\_\_:
- Operand code
  - Opcode**
  - Source code
  - All of these
30. Which are contains one or more register that may be referenced by machine instruction:
- Input
  - Output
  - CPU**
  - ALU
31. Memory -mapped \_\_\_\_\_ is used this is just another memory address:
- Input
  - Output
  - Both**
  - None
32. Which operation use one operand or unary operations:
- Arithmetic
  - Logical
  - Both**
  - None
33. 3-Address format can be represented as :
- dst <-[src1][src2]**
  - dst ->[src1][src2]
  - dst <->[src1][src2]
  - All of these
34. 2- Address format can be represented as:
- dst ->[dst]\*[src]
  - dst<-[dst]\*[src]**
  - dst<->[dst]\*[src]
  - All of these
35. In 1-address format how many address is used both as source as well as destination:
- 1**
  - 2
  - 3
  - 4
36. The stack pointer is maintained in a \_\_\_\_\_:
- Data
  - Register**
  - Address
  - None of these
37. \_\_\_\_\_ mode of addressing is a form of implied addressing:
- Stack**
  - Array
  - Queue
  - Binary
38. Stack uses RPN to solve \_\_\_\_\_ expression:
- Logical
  - Arithmetic**
  - Both
  - None
39. In the RPN scheme the numbers and operators are listed \_\_\_\_\_:
- One after another**
  - One before another
  - Another after one
  - Another before one
40. In addressing modes instruction has primarily how many components:
- 1
  - 2**
  - 3
  - 4

41. EA stands for:
- Effective add
  - Effective absolute
  - Effective address**
  - End address
42. In which addressing the operand is actually present in instruction:
- Immediate addressing**
  - Direct addressing
  - Register addressing
  - None of these
43. In which addressing the simplest addressing mode where an operand is fetched from memory is :
- Immediate addressing
  - Direct addressing**
  - Register addressing
  - None of these
44. which addressing is a way of direct addressing:
- Immediate addressing
  - Direct addressing
  - Register addressing**
  - None of these
45. In which mode the main memory location holds the EA of the operand:
- Immediate addressing
  - Direct addressing
  - Register addressing
  - Indirect addressing**
46. Which addressing is an extremely influential way of addressing:
- Displacement addressing**
  - Immediate addressing
  - Direct addressing
  - Register addressing
47. In the base –register addressing the register reference may be\_\_\_\_\_:
- Implicit
  - Explicit
  - Both**
  - None
48. In post –indexing the indexing is performed\_\_\_\_\_
- Before the indirection
  - After the indirection**
  - Same time indirection
  - All of these
49. In post-indexing the contents of the address field are used to access a memory location containing a address:
- Immediate addressing
  - Direct addressing**
  - Register addressing
  - None of these
50. In pre –indexing the indexing is performed\_\_\_\_\_
- Before the indirection**
  - After the indirection
  - Same time indirection
  - All of these
51. The final addressing mode that we consider is\_\_\_\_\_:
- Immediate addressing
  - Direct addressing
  - Register addressing
  - Stack addressing**
52. In data transfer manipulation designing as instruction set for a system is a complex\_\_\_\_\_:
- Art**
  - System
  - Computer
  - None of these

53. Which addressing is an extremely influential way of addressing:

- a. Immediate addressing
- b. Direct addressing
- c. Register addressing
- d. **Displacement addressing**

54. Which addressing offset can be the content of PC and also can be negative:

- a. **Relative addressing**
- b. Immediate addressing
- c. Direct addressing
- d. Register addressing

55. The length of instruction set depends on:

- a. Data size
- b. **Memory size**
- c. Both
- d. None

56. In length instruction some programs want a complex instruction set containing more instruction, more addressing modes and greater address range, as in case of :

- a. RISC
- b. **CISC**
- c. Both
- d. None

57. In length instruction other programs on the other hand, want a small and fixed-size instruction set that contains only a limited number of opcodes, as in case of :

- a. **RISC**
- b. CISC
- c. Both
- d. None

58. The instruction set can have variable-length instruction format primarily due to:

- a. Varying number of operands
- b. Varying length of opcodes in some CPU
- c. **Both**
- d. None

59. An instruction code must specify the address of the\_:

- a. Opcode
- b. **Operand**
- c. Both
- d. None

60. A simple\_\_\_\_\_differs widely from a Turing machine:

- a. CISC
- b. RISC
- c. **CPU**
- d. ALU

61. How many types of basically Data manipulation:

- a. 1
- b. 2
- c. **3**
- d. 4

62. Which is data manipulation types are:

- a. Arithmetic instruction
- b. Shift instruction
- c. Logical and bit manipulation instructions
- d. **All of these**

63. Arithmetic instruction are used to perform operation on:

- a. **Numerical data**
- b. Non-numerical data
- c. Both
- d. None

64. How many basic arithmetic operation:

- a. 1
- b. 2
- c. 3
- d. **4**

65. which are arithmetic operation are:

- a. Addition
- b. Subtraction
- c. Multiplication
- d. Division
- e. **All of these**
- f. None of these

66. In which instruction are used to perform Boolean operation on non-numerical data:

- a. **Logical and bit manipulation**
- b. Shift manipulation
- c. Circular manipulation
- d. None of these

67. Which operation is used to shift the content of an operand to one or more bits to provide necessary variation:
- Logical and bit manipulation
  - Shift manipulation**
  - Circular manipulation
  - None of these
68. \_\_\_\_\_ is just like a circular array:
- Data
  - Register**
  - ALU
  - CPU
69. Which control refers to the track of the address of instructions:
- Data control
  - Register control
  - Program control**
  - None of these
70. In program control the instruction is set for the statement in a:
- Parallel
  - Sequence**
  - Both
  - None
71. How many types of unconditional jumps used in program control are follows:
- 1
  - 2
  - 3**
  - 4
72. Which are unconditional jumps used in program control are follows:
- Short jump
  - Near jump
  - Far jump
  - All of these**
73. Which instruction is used in program control and used to decrement CX and conditional jump:
- Loop**
  - Shift manipulation
  - Circular manipulation
  - None of these
74. Which is always considered as short jumps:
- Conditional jump**
  - Short jump
  - Near jump
  - Far jump
75. Who change the address in the program counter and cause the flow of control to be altered:
- Shift manipulation
  - Circular manipulation
  - Program control instruction**
  - All of these
76. Which is the common program control instructions are:
- Branch
  - Jump
  - Call a subroutine
  - Return
  - All of these**
  - None of these
77. Which is a type of microprocessor that is designed with limited number of instructions:
- CISC
  - RISC
  - Both**
  - None
78. SMP Stands for:
- System multiprocessor
  - Symmetric multiprocessor**
  - Both
  - None
79. UMA stands for:
- Uniform memory access**
  - Unit memory access
  - Both
  - None
80. NUMA stands for:
- Number Uniform memory access**
  - Not Uniform memory access
  - Non Uniform memory access
  - All of these
81. SIMD stands for:
- System instruction multiple data
  - Single instruction multiple data**
  - Symmetric instruction multiple data
  - Scale instruction multiple data

82. MIMD stands for:
- Multiple input multiple data
  - Memory input multiple data
  - Multiple instruction multiple data**
  - Memory instruction multiple data
83. HLL stands for:
- High level languages**
  - High level line
  - High level logic
  - High level limit
84. Which is a method of decomposing a sequential process into sub operations:
- Pipeline**
  - CISC
  - RISC
  - Database
85. How many types of array processor:
- 1
  - 2**
  - 3
  - 4
86. Which are the types of array processor:
- Attached array processor
  - SIMD array processor
  - Both**
  - None
87. Which are the application of vector processing:
- Weather forecasting
  - Artificial intelligence
  - Experts system
  - Images processing
  - Seismology
  - Gene mapping
  - Aerodynamics
  - All of these**
  - None of these
88. Which types of jump keeps a 2\_byte instruction that holds the range from- 128to127 bytes in the memory location:
- Far jump
  - Near jump
  - Short jump**
  - All of these
89. Which types of register holds a single vector containing at least two read ports and one write ports:
- Data system
  - Data base
  - Memory
  - Vector register**
90. Parallel computing means doing several takes simultaneously thus improving the performance of the\_\_\_\_\_:
- Data system
  - Computer system**
  - Memory
  - Vector register
91. Which is used to speed-up the processing:
- Pipeline
  - Vector processing
  - Both**
  - None
92. Which processor is a peripheral device attached to a computer so that the performance of a computer can be improved for numerical computations:
- Attached array processor**
  - SIMD array processor
  - Both
  - None
93. Which processor has a single instruction multiple data stream organization that manipulates the common instruction by means of multiple functional units:
- Attached array processor
  - SIMD array processor**
  - Both
  - None
94. Which carry is similar to rotate without carry operations:
- Rotate carry
  - Rotate through carry**
  - Both
  - None
95. In the case of a left arithmetic shift , zeros are Shifted to the\_\_\_\_\_:
- Left
  - Right**
  - Up
  - Down
96. In the case of a right arithmetic shift the sign bit values are shifted to the\_\_\_\_\_:
- Left**
  - Right
  - Up
  - Down

**Computer System Architecture MCQ 05**

1. A number system that uses only two digits, 0 and 1 is called the \_\_\_\_\_:
  - a. Octal number system
  - b. Binary number system**
  - c. Decimal number system
  - d. Hexadecimal number system
2. In which computers, the binary number are represented by a set of binary storage device such as flip flop:
  - a. Microcomputer
  - b. Personal computer
  - c. Digital computer**
  - d. All of these
3. A binary number can be converted into \_\_\_\_\_:
  - a. Binary number
  - b. Octal number
  - c. Decimal number**
  - d. Hexadecimal number
4. Which system is used to refer amount of things:
  - a. Number system**
  - b. Number words
  - c. Number symbols
  - d. All of these
5. \_\_\_\_\_ are made with some part of body, usually the hands:
  - a. Number words
  - b. Number symbols
  - c. Number gestures**
  - d. All of these
6. \_\_\_\_\_ are marked or written down:
  - a. Number system
  - b. Number words
  - c. Number symbols**
  - d. Number gestures
7. A number symbol is called a \_\_\_\_\_:
  - a. Arabic numerals
  - b. Numerals**
  - c. Both
  - d. None of these
8. 0,1,2,3,4,5,6,7,8 and 9 numerals are called:
  - a. Arabic numerals**
  - b. String numerals
  - c. Digit numerals
  - d. None of these
9. How many system of arithmetic, which are often used in digital system:
  - a. 5
  - b. 6
  - c. 3
  - d. 4**
10. Which are the system of arithmetic, which are often used in digital system:
  - a. Binary digit
  - b. Decimal digit
  - c. Hexadecimal digit
  - d. Octal digit
  - e. All of these**
11. In any system, there is an ordered set of symbols also known as \_\_\_\_\_:
  - a. Digital
  - b. Digit**
  - c. Both
  - d. None of these
12. Which is general has two parts in number system:
  - a. Integer
  - b. Fraction
  - c. Both**
  - d. None of these
13. MSD stand for:
  - a. Most significant digit**
  - b. Many significant digit
  - c. Both a and b
  - d. None of these
14. LSD stand for:
  - a. Less significant digit
  - b. Least significant digit**
  - c. Loss significant digit
  - d. None of these
15. The \_\_\_\_\_ and \_\_\_\_\_ of a number is defined as the number of different digits which can occur in each position in the system:
  - a. Base
  - b. Radix
  - c. Both**
  - d. None of these
16. Which system has a base or radix of 10:
  - a. Binary digit
  - b. Hexadecimal digit
  - c. Decimal digit**
  - d. Octal digit

17. Each of the ten decimal digits \_\_\_\_\_:
- 1 through 10
  - 0 through 9**
  - 2 through 11
  - All of these
18. The binary number system is also called a \_\_\_\_\_:
- Base one system
  - Base two system**
  - Base system
  - Binary system
19. The two symbols 0 and 1 are known as:
- Bytes
  - Bits**
  - Digit
  - All of these
20. In which counting, single digit are used for none and one:
- Decimal counting
  - Octal counting
  - Hexadecimal counting
  - Binary counting**
21. In which numeral every position has a value 2 times the value of the position to its right:
- Decimal
  - Octal
  - Hexadecimal
  - Binary**
22. A binary number with 4 bits is called a \_\_\_\_\_:
- Bit
  - Bytes
  - Nibble**
  - None of these
23. A binary number with 8 bits is called as a \_\_\_\_\_:
- Bytes**
  - Bits
  - Nibble
  - All of these
24. In which digit the value increases in power of two starting with 0 to left of the binary point and decreases to the right of the binary point starting with power -1:
- Hexadecimal
  - Decimal
  - Binary**
  - Octal
25. Which system is used in digital computers because all electrical and electronic circuits can be made to respond to the states concept:
- Hexadecimal number
  - Binary number**
  - Octal number
  - Decimal number
26. Which addition is performed in the same manner as decimal addition:
- Binary**
  - Decimal
  - Both
  - None of these
27. \_\_\_\_\_ in all digital systems actually performs addition that can handle only two number at a time:
- Register
  - circuit**
  - digital
  - All of these
28. Which machine can perform addition operation in less than 1 ms:
- Digital machine**
  - Electronic machine
  - Both
  - None of these
29. \_\_\_\_\_ is the inverse operation of addition:
- Addition
  - Multiply
  - Subtraction**
  - Divide
30. \_\_\_\_\_ of a number from another can be accomplished by adding the complement of the subtrahend to the minuend:
- Subtraction**
  - Multiply
  - Divide
  - All of these
31. Complement the subtrahend by converting all \_\_\_\_\_ and all \_\_\_\_\_:
- 1's to 0's
  - 0's to 1's
  - Both**
  - None of these



32. Each device represent :
- 1 bit**
  - 2 bit
  - 3 bit
  - 4 bit
33. A 0 in the sign bit represents a \_\_\_\_\_ and a 1 in the sign bit represents a \_\_\_\_\_:
- Positive number
  - Negative number
  - Both**
  - None of these
34. How many main sign number binary codes are used:
- 4
  - 5
  - 3**
  - 6
35. Which are the types of binary codes number:
- Sign magnitude
  - 1's complement code
  - 2's complement code
  - All of these
36. How many types of addition in the 2's complement system:
- 3
  - 4**
  - 5
  - 6
37. Which are the types of addition in the 2's complement system:
- Both number positive
  - A Positive number and a smaller negative number
  - A negative number and a smaller positive number
  - Both number negative
  - All of these**
38. How many important ideas to notice about these odometer readings:
- 1
  - 2**
  - 3
  - 4
39. Which are the types of important ideas to notice about these odometer readings:
- The MSB is the sign bit :0 for a +sign and 1 for a - sign
  - The negative number represent the 2's complement of the positive number
  - Both**
  - All of these
40. Which is an algorithm or techniques used to multiply two numbers:
- Addition algorithm
  - Subtraction algorithm
  - Multiplication algorithm**
  - All of these
41. Which algorithm are used depending on the size of the numbers:
- Simple algorithm
  - Specific algorithm**
  - Both
  - None of these
42. Which algorithm is named after Volker Strassen:
- Strassen algorithm**
  - Matrix algorithm
  - Both
  - None of these
43. Strassen algorithm was published in \_\_\_\_\_:
- 1967
  - 1969**
  - 1987
  - 1980
44. Which algorithm is used for matrix multiplication:
- Simple algorithm
  - Specific algorithm
  - Strassen algorithm**
  - Addition algorithm
45. Which algorithm is a divided and conquer algorithm that is asymptotically faster:
- Simple algorithm
  - Specific algorithm
  - Strassen algorithm**
  - Addition algorithm
46. Which method required 8 multiplication and 4 addition:
- Multiplication
  - Usual multiplication**
  - Both
  - None of these
47. Which algorithm is a multiplication algorithm which multiplies two signed binary numbers in 2's complement notation:
- Usual multiplication
  - Booth's multiplication**
  - Both
  - None of these
48. Which algorithm includes repeated addition of two predetermined values A and S to a product P and then performs a rightward arithmetic shift on P:
- Booth's algorithm**
  - Usual algorithm
  - Multiplication algorithm
  - None of these

49. Which algorithm in mathematics expresses the outcome of the process of division of integers by another:
- Addition algorithm
  - Multiplication algorithm
  - Division algorithm**
  - None of these
50. Which algorithm is used to find GCD of two integers:
- Multiplication algorithm
  - Division algorithm**
  - Addition algorithm
  - Simple algorithm
51. Which algorithm is used as a general variant of a theorems, in the domain of integral numbers:
- Multiplication algorithm
  - Division algorithm**
  - Addition algorithm
  - Simple algorithm
52. How many main approaches to algorithm for division:
- 2**
  - 3
  - 4
  - 5
53. How many algorithm based on add/subtract and shift category:
- 2
  - 4
  - 3**
  - 6
54. Which are the algorithm based on add/subtract and shift category:
- Restoring division
  - Non-restoring division
  - SRT division
  - All of these**
55. Several methods for converting a \_\_\_\_\_:
- Decimal number to a binary number**
  - Binary number to a decimal number
  - Octal number to a decimal number
  - Hexadecimal number to a binary number
56. A popular method known as double-dabble method also known as \_\_\_\_\_:
- Divided-by-one method
  - Divided-by-two method**
  - Both
  - None of these
57. Which method is used to convert a large decimal number into its binary equivalent:
- Double dabble method
  - Divided-by-two-method
  - Both**
  - None of these
58. In this method, the decimal number is \_\_\_\_\_:
- Repeatedly divided by 4
  - Repeatedly divided by 2**
  - Repeatedly divided by 1
  - None of these
59. The conversion of decimal fraction to binary fraction may be accomplished by using \_\_\_\_\_:
- Several techniques**
  - Simple techniques
  - Both
  - None of these
60. Which system was used extensively by early mini computers:
- Decimal number
  - Octal number**
  - Hexadecimal number
  - Binary number
61. 3 bit binary numbers can be represented by \_\_\_\_\_:
- Binary number
  - Decimal number
  - Hexadecimal number
  - Octal number**
62. A number system that uses eight digits, 0, 1, 2, 3, 4, 5, 6, and 7 is called an \_\_\_\_\_:
- Binary number system
  - Decimal number system
  - Octal number system**
  - None of these
63. Which system each digit has a weight corresponding to its position:
- Hexadecimal number system
  - Binary number system
  - Decimal number system
  - Octal number system**
64. Which odometer is a hypothetical device similar to the odometer of a car:
- Binary
  - Decimal
  - Hexadecimal
  - Octal**
65. An \_\_\_\_\_ can be easily converted to its decimal equivalent by multiplying each octal digit by positional weight:
- Binary number
  - Octal number**
  - Hexadecimal number
  - Decimal number
66. The simple procedure is to use \_\_\_\_\_:
- Binary-triplet method**
  - Decimal-triplet method
  - Octal-triplet method
  - All of these

67. Which system groups number by sixteen and power of sixteen:  
 a. Binary    **b. Hexadecimal**  
 c. Octal    d. None of these
68. Which number are used extensively in microprocessor work:  
 a. Octal    **b. Hexadecimal**  
 c. Both    d. None of these
69. Which number is formed from a binary number by grouping bits in groups of 4-bit each starting at the binary point:  
 a. Binary    b. Octal  
 c. Decimal    **d. Hexadecimal**
70. Which number system has a base of 16 :  
 a. Binary number system  
 b. Octal number system  
 c. Decimal number system  
**d. Hexadecimal number system**
71. Counting in hex, each digit can be increment from \_\_\_\_\_:  
 a. **0 to F**    b. 0 to G  
 c. 0 to H    d. 0 to J
72. Which number can be converted into binary numbers by converted each hexadecimal digit to 4 bits binary equivalent using the code:  
 a. Binary number    b. Decimal number  
 c. Octal number    **d. Hexadecimal number**
73. One way to convert from decimal to hexadecimal is the \_\_\_\_\_:  
 a. Double dabble method  
**b. Hex dabble method**  
 c. Binary dabble method  
 d. All of these
74. Binary numbers can also be expressed in this same notation by \_\_\_\_\_ representation:  
 a. **Floating point**  
 b. Binary point  
 c. Decimal point  
 d. All of these
75. How many parts of floating point representation of a number consists:  
 a. 4    **b. 2**    c. 3    d. 5
76. The first part of floating point represents a signed fixed point number called:  
 a. Exponent  
 b. Digit  
 c. Number  
**d. Mantissa**
77. The second part of floating point designates the position of the decimal point and is called:  
 a. Mantissa    b. Binomial  
 c. Octal    **d. Exponent**
78. The fixed point mantissa may be \_\_\_\_\_ or \_\_\_\_\_:  
 a. Fraction    b. Integer  
**c. Both**    d. None of these
79. The number of bit required to express \_\_\_\_\_ and \_\_\_\_\_ are determined by the accuracy desired from the computing system:  
 a. Exponent    b. Mantissa  
**c. Both**    d. None of these
80. Which part is not physically indicated in the register:  
 a. Binary    **b. Decimal**  
 c. Octal    d. None of these
81. The exponent contains the decimal number :  
 a. +05    b. +03  
**c. +04**    d. +07
82. The first or the integer part is known as \_\_\_\_\_:  
 a. Exponent    b. Integer  
 c. Binomial    **d. None of these**
83. How many bits of mantissa :  
 a. 4    b. 8  
**c. 10**    d. 16
84. How many bit of exponent:  
 a. 4    **b. 6**  
 c. 8    d. 10
85. Which number is said to be normalized if the more significant position of the mantissa contains a non zero digit:  
 a. Binary point number  
 b. Mantissa point number  
**c. Floating point number**  
 d. None of these
86. Which operation with floating point numbers are more complicated then arithmetic operation with fixed point number :  
 a. Logical operation  
**b. Arithmetic operation**  
 c. Both  
 d. None of these

**Computer System Architecture MCQ 06**

1. Which is an important data transfer technique :
  - a. CPU
  - b. DMA**
  - c. CAD
  - d. None of these
  
2. Which device can be thought of as transducers which can sense physical effects and convert them into machine-tractable data:
  - a. Storage devices
  - b. Peripheral devices**
  - c. Both
  - d. None
  
3. Which devices are usually designed on the complex electromechanical principle:
  - a. Storage devices
  - b. Peripheral devices
  - c. Input devices**
  - d. All of these
  
4. Which disk is one of the important I/O devices and its most commonly used as permanent storage devices in any processor:
  - a. Hard disk**
  - b. Optical disk
  - c. Magneto disk
  - d. Magneto Optical disk
  
5. In storage devices PC have hard disk having capacities in the range of \_\_\_\_\_:
  - a. 12GB to 15GB
  - b. 15GB to 20GB
  - c. 20GB to 80GB**
  - d. 80GB to 85GB
  
6. Which disk is a 3.5-inch diskette with a capacity of 1.44MB:
  - a. Soft disk
  - b. Floppy disk
  - c. Both**
  - d. None
  
7. Which has a large storage capacity of 2 to 8GB:
  - a. Magnetic tape**
  - b. Magnetic disk
  - c. Soft disk
  - d. Floppy disk
  
8. Which disk read the data by reflecting pulses of laser beams on the surface:
  - a. Magnetic disk
  - b. Soft disk
  - c. Floppy disk
  - d. Optical disk**
  
9. Data access time of optical disk varies from 200 to 350minutes with transfer rate of \_\_\_\_\_:
  - a. 130KB/s to 400KB/s
  - b. 130KB/s to 500KB/s
  - c. 150KB/s to 600KB/s
  - d. 150KB/s to 800KB/s**
  
10. NAND type flash memory data storage devices integrated with a \_\_\_\_\_ interface:
  - a. ATM
  - b. LAN
  - c. USB**
  - d. DBMS
  
11. Which disk is based on the same principle as the optical disk:
  - a. Optical disk
  - b. Magnetic disk
  - c. Magneto-optical disk**
  - d. All of these
  
12. WAN stands for:
  - a. Wide area network**
  - b. Word area network
  - c. World area network
  - d. Window area network
  
13. The human-interactive I/O devices can be further categorized as \_\_\_\_\_:
  - a. Direct
  - b. Indirect
  - c. Both**
  - d. None
  
14. I/O devices are categorized in 2 parts are:
  - a. Character devices
  - b. Block devices
  - c. Numeral devices
  - d. Both a & b**
  
15. UART stands for:
  - a. Universal \_\_\_\_\_ asynchronization receiver/transmitter
  - b. Universal \_\_\_\_\_ asynchronous receiver/transmitter**
  - c. United asynchronous receiver/transmitter
  - d. Universal automatic receiver/transmitter

16. Which are following pointing devices:
- Light pen
  - Joystick
  - Mouse
  - All of these**
17. Full form of LED:
- Light emitting diode**
  - Light encounter destination
  - Live emitting diode
  - None of these
18. In \_\_\_\_\_ mouse we use pair of LED:
- Optical**
  - Digital
  - Analog
  - All of these
19. \_\_\_\_\_ is device that is designed for gaming purposes and based on principle of electricity:
- Joy
  - Stick
  - Joystick**
  - None of these
20. Joystick uses shaft potentiometers for:
- X-Y DIRECTION**
  - Only X direction
  - Only Y direction
  - All of these
21. Full form of ADC:
- Analog to digital converter**
  - Digital to analog converter
  - Accumulator digital converter
  - All of these
22. A system that enables computer to recognize human voice called:
- Voice system
  - Voice input system**
  - Input system
  - None of these
23. 2 commonly used voice input systems are:
- Micro
  - Microphone
  - Voice recognition software
  - Both b & c**
24. Optical scanner devices are:
- MICR
  - OMR
  - OCR
  - All of these**
25. MICR stands for:
- Magnetic ink character recognition**
  - Magnetic initiate character recognition
  - Both a & b
  - None of these
26. \_\_\_\_\_ technique is used in evaluating objective answer sheets:
- Optical Mark Reader**
  - Optical Marker Reader
  - Optical Marker Reading
  - All of these
27. \_\_\_\_\_ technique help in banking sector:
- OCR
  - OMR
  - MICR**
  - None of these
28. \_\_\_\_\_ camera records image, converts it into digital format via ADC and stores it on a frame buffer:
- Video**
  - Without video
  - Audio
  - None of these
29. Sensors are \_\_\_\_\_ type of devices:
- Interactive
  - Non-interactive**
  - Interaction
  - Intermediate
30. Output devices commonly referred as:
- Terminals**
  - Host
  - Receivers
  - Senders
31. Terminals classified in to 2 types are:
- Hard copy
  - Soft copy
  - Both a & b**
  - None of these
32. VDU stands for:
- Video display unit
  - Visual display unit**
  - Visual data unit
  - None of these

33. A monitor consists of :
- ARU
  - BRT
  - CRT**
  - ARU
34. LCD stands for:
- Liquid crystal display**
  - Liquid catalog display
  - Liquid crystal data
  - Liquid code display
35. The size of monitor ranges from:
- 12-12 inch
  - 12-21 inch**
  - 21-12 inch
  - 21-11 inch
36. Range of color depends on:
- Number of bits code lines with each pixel
  - Number of bits associated with each pixel**
  - Number of instructions associated with each pixel
  - Number of code associated with each pixel
37. Which parameter defines number of times electron beam scans screen in a second:
- Refresh rate**
  - Data transfer rate
  - Pitch rate
  - All of these
38. Refresh rate refresh screen up to:
- 30 Hz per frame**
  - 33 Hz per frame
  - 44 Hz per frame
  - 20 Hz per frame
39. Printer speed is \_\_\_\_\_ pages per minute:
- 13
  - 12**
  - 11
  - 10
40. Printer is a:
- Hardcopy**
  - Softcopy
  - Both a & b
  - None of these
41. Laser printer is type of:
- Impact printer
  - Non-impact printer**
  - Both a & b
  - None of these
42. \_\_\_\_\_ printer print 120 to 200 characters per second:
- Dot-matrix**
  - Laser
  - Line
  - None of these
43. In \_\_\_\_\_ printing, each character is printed on the paper by striking a pin or hammer against an inked ribbon:
- Non-impact printing
  - Impact printing**
  - Both a & b
  - None of these
44. Dot matrix printer is 2 types is:
- Daisy wheels
  - Matrix printer
  - High quality matrix printer
  - Both a & c**
45. In daisy wheel printer can print 40 character/second and bold characters are achieved by overprinting the text:
- Four times
  - Double
  - Once**
  - Thrice
46. \_\_\_\_\_ printers spray tiny droplets of coloured inks on the paper and pattern depends on how nozzle sprays the ink:
- Inkjet printer**
  - Laser printer
  - Daisy wheel
  - Dot matrix printer
47. Laser printer is a type of :
- Impact printing
  - Non-impact printing**
  - Both a & b
  - None of these
48. \_\_\_\_\_ are used for printing big charts, drawings, maps and 3 dimensional illustrations specially for architectural and designing purposes:
- Printers
  - Plotters**
  - Speakers
  - Mouse

49. DAC stands for:
- Digital to analog converter**
  - Analog to digital converter
  - Only digital converter
  - Only analog converter
50. In text to speech, speech is synthesized using lookup table of \_\_\_\_\_ and these clubbed together to form \_\_\_\_\_:
- Phonemes, Words**
  - Phonemes, Sentences
  - Character, Phonemes
  - Word, Character
51. \_\_\_\_\_ interface is an entity that controls data transfer from external device, main memory and or CPU registers:
- I/O interface**
  - CPU interface
  - Input interface
  - Output interface
52. The operating mode of I/O devices is \_\_\_\_\_ for different device:
- Same
  - Different**
  - Optimum
  - Medium
53. To resolve problems of I/O devices there is a special hardware component between CPU and \_\_\_\_\_ to supervise and synchronize all input output transfers:
- Software
  - Hardware
  - Peripheral**
  - None of these
54. I/O modules are designed with aims to:
- Achieve device independence
  - Handle errors
  - Speed up transfer of data
  - Handle deadlocks
  - Enable multi-user systems to use dedicated device
  - All of these**
55. IDE is a \_\_\_\_\_ controller:
- Disk**
  - Floppy
  - Hard
  - None of these
56. In devices, controller is used for \_\_\_\_\_:
- Buffering the data**
  - Manipulate the data
  - Calculate the data
  - Input the data
57. By which signal flow of traffic between internal and external devices is done:
- Only control signal
  - Only timing signal
  - Control and timing signal**
  - None of these
58. In devices 2 status reporting signals are:
- BUSY
  - READY
  - Both a & b**
  - None of these
59. I/O module must recognize a \_\_\_\_\_ address for each peripheral it controls:
- Long
  - Same
  - Unique**
  - Bigger
60. Each interaction b/w CPU and I/O module involves:
- Bus arbitration**
  - Bus revolution
  - Data bus
  - Control signals
61. Which are 4 types of commands received by an interface:
- Control, status, data output, data input**
  - Only data input
  - Control, flag, data output, address arbitration
  - Data input, data output, status bit, decoder
62. Two ways in which computer buses can communicate with memory in case of I/O devices by using:
- Separate buses for memory and I/O device
  - Common bus for memory and I/O device
  - both a & b**
  - none of these
63. There are 2 ways in which addressing can be done in memory and I/O device:
- Isolated I/O
  - Memory-mapped I/O
  - Both a & b**
  - None of these

64. Advantages of isolated I/O are:
- Commonly usable
  - Small number of I/O instructions
  - Both a & b**
  - None of these
65. In \_\_\_\_\_ addressing technique separate address space is used for both memory and I/O device:
- Memory-mapped I/O
  - Isolated I/O**
  - Both a & b
  - None of these
66. \_\_\_\_\_ is a single address space for storing both memory and I/O devices:
- Memory-mapped I/O**
  - Isolated I/O
  - Separate I/O
  - Optimum I/O
67. Following are the disadvantages of memory-mapped I/O are:
- Valuable memory address space used up
  - I/O module register treated as memory addresses
  - Same machine intersection used to access both memory and I/O device
  - All of these**
68. Who determine the address of I/O interface:
- Register select
  - Chip select
  - Both a & b**
  - None of these
69. 2 control lines in I/O interface is:
- RD, WR**
  - RD, DATA
  - WR, DATA
  - RD, MEMORY
70. In I/O interface RS1 and RS0 are used for selecting:
- Memory
  - Register**
  - CPU
  - Buffer
71. If CPU and I/O interface share a common bus than transfer of data b/w 2 units is said to be:
- Synchronous**
  - Asynchronous
  - Clock dependent
  - Decoder independent
72. All the operations in a digital system are synchronized by a clock that is generated by:
- Clock
  - Pulse
  - Pulse generator**
  - Bus
73. Asynchronous means:
- Not in step with the elapse of address
  - Not in step with the elapse of control
  - Not in step with the elapse of data
  - Not in step with the elapse of time**
74. \_\_\_\_\_ is a single control line that informs destination unit that a valid is available on the bus:
- Strobe**
  - Handshaking
  - Synchronous
  - Asynchronous
75. What is disadvantage of strobe scheme:
- No surety that destination received data before source removes it
  - Destination unit transfer without knowing whether source placed data on data bus
  - Can't said
  - Both a & b**
76. In \_\_\_\_\_ technique has 1 or more control signal for acknowledgement that is used for intimation:
- Handshaking**
  - Strobe
  - Both a & b
  - None of these
77. The keyboard has a \_\_\_\_\_ asynchronous transfer mode:
- Parallel
  - Serial**
  - Optimum
  - None
78. In \_\_\_\_\_ transfer each bit is sent one after the another in a sequence of event and requires just one line:
- Serial**
  - Parallel
  - Both a & b
  - None of these
79. Modes of transfer b/w computer and I/O device are:
- Programmed I/O
  - Interrupt-initiated I/O
  - DMA
  - Dedicated processor such as IOP and DCP
  - All of these**



80. \_\_\_\_\_ operations are the results of I/O operations that are written in the computer program:
- Programmed I/O**
  - DMA
  - Handshaking
  - Strobe
81. \_\_\_\_\_ is a dedicated processor that combines interface unit and DMA as one unit:
- Input-Output Processor**
  - Only input processor
  - Only output processor
  - None of these
82. \_\_\_\_\_ is a special purpose dedicated processor that is designed specially designed for data transfer in network:
- Data Processor
  - Data Communication Processor**
  - DMA Processor
  - Interrupt Processor
83. \_\_\_\_\_ processor has to check continuously till device becomes ready for transferring the data:
- Interrupt-initiated I/O**
  - DMA
  - IOP
  - DCP
84. Interrupt-driven I/O data transfer technique is based on \_\_\_\_\_ concept:
- On demand processing**
  - Off demand processing
  - Both a & b
  - None of these
85. Which technique helps processor to run a program concurrently with I/O operations:
- Interrupt driven I/O**
  - DMA
  - IOP
  - DCP
86. 3 types of exceptions are:
- Interrupts
  - Traps
  - System calls
  - All of these**
87. Which exception is also called software interrupt:
- Interrupt
  - System calls**
  - Traps
  - All of these
88. User programs interact with I/O devices through:
- Operating system**
  - Hardware
  - Cpu
  - Microprocessor
89. Which table handle store address of interrupt handling subroutine:
- Interrupt vector table**
  - Vector table
  - Symbol link table
  - None of these
90. Which technique is used that identifies the highest priority resource by means of software:
- Daisy chaining
  - Polling**
  - Priority
  - Chaining
91. \_\_\_\_\_ interrupt establishes a priority over the various sources to determine which request should be entertained first:
- Priority interrupt**
  - Polling
  - Daisy chaining
  - None of these
92. \_\_\_\_\_ method is used to establish priority by serially connecting all devices that request an interrupt:
- Polling
  - Daisy chaining**
  - Priority
  - None of these
93. In daisy chaining device 0 will pass signal only if it has:
- Interrupt request
  - No interrupt request**
  - Both a & b
  - None of these
94. VAD stands for:
- Vector address**
  - Symbol address
  - Link address
  - None of these

95. \_\_\_\_\_ interrupt method uses a register whose bits are set separately by interrupt signal for each device:
- Parallel priority interrupt**
  - Serial priority interrupt
  - Both a & b
  - None of these
96. \_\_\_\_\_ register is used whose purpose is to control status of each interrupt request in parallel priority interrupt:
- Mask
  - Mark
  - Make
  - Mask**
97. The ANDed output of bits of interrupt register and mask register are set as input of:
- Priority decoder
  - Priority encoder**
  - Priority decoder
  - Multiplexer
98. Which 2 output bits of priority encoder are the part of vector address for each interrupt source in parallel priority interrupt:
- A0 and A1**
  - A0 and A2
  - A0 and A3
  - A1 and A2
99. What is the purpose
100. \_\_\_\_\_ of A0 and A1 output bits of priority encoder in parallel priority:
- Tell data bus which device is to entertained and stored in VAD
  - Tell subroutine which device is to entertained and stored in VAD**
  - Tell subroutine which device is to entertained and stored in SAD
  - Tell program which device is to entertained and stored in VAD
101. \_\_\_\_\_ When CPU invokes a subroutine it performs following functions:
- Pushes updated PC content(return address) on stack
  - Loads PC with starting address of subroutine
  - Loads PC with starting address of ALU
  - Both a & b**
102. \_\_\_\_\_ DMAC stands for:
- Direct memory access controller**
  - Direct memory accumulator controller
  - Direct memory access content
  - Direct main access controller
103. \_\_\_\_\_ IOP stands for:
- Input output processor**
104. \_\_\_\_\_ DCP stands for:
- Data communication processor**
105. \_\_\_\_\_ Which may be classified as a processor with the direct memory access capability that communicates with I/O devices:
- DCP
  - IOP**
  - Both
  - None
106. \_\_\_\_\_ The processor that communicates with remote terminals like telephone or any other serial communication media in serial fashion is called \_\_\_\_\_:
- DCP**
  - IOP
  - Both
  - None
107. \_\_\_\_\_ Instruction that are used for reading from memory by an IOP called \_\_\_\_\_:
- Commands**
  - Block diagram
  - Interrupt
  - None of these
108. \_\_\_\_\_ Data communication with a remote device a special data communication is used \_\_\_\_\_:
- Multiprocessor
  - Serial communication**
  - DCP
  - IOP
109. \_\_\_\_\_ CRC stands for:
- Cyclic redundancy check**
110. \_\_\_\_\_ Which is used for synchronous data, PID is process ID, followed by message, CRC code and EOP indicating end of block:
- DCP
  - CRC
  - IOP
  - SYNC**
111. \_\_\_\_\_ Which is commonly used in high –speed devices to realize full efficiency of communication link:
- Transmission
  - Synchronous communication**
  - Multiprocessor
  - All of these

112. Multiprocessor use \_\_\_\_\_ than two CPUs assembled in single system unit:
- One or More
  - Two or More**
  - One or One
  - Two or Two
113. Which refers the execution of various software process concurrently:
- Multiprocessor**
  - Serial communication
  - DCP
  - IOP
114. Which is used for this and known as high speed buffer exist with almost each process?
- Primary
  - RAM
  - Cache**
  - None of these
115. Data and instructions are accessed from local memory and global memory that is used by :
- Internetworking facilities**
  - Interconnection facilities
  - Both a & b
  - None of these
116. Multiprocessor uses large caches but limited process that shares \_\_\_\_\_
- Memory bus
  - Single memory bus**
  - Double memory bus
  - None of these
117. Distributed are shares also referred to as tightly coupled and loosely coupled multiprocessor respectively and hence called \_\_\_\_\_
- Coupled multiprocessor**
  - Shared multiprocessor
  - Distributed multiprocessor
  - None of these
118. Which consist if a numbers of processor can be accessed among various shared memory modules?
- Coupled memory multiprocessor
  - Shared memory multiprocessor**
  - Distributed memory multiprocessor
  - None of these
119. Which keeps a number of processors in which virtual storage space is assigned for redundant execution:
- Coupled memory multiprocessor
  - Shared memory multiprocessor
  - Distributed memory multiprocessor**
  - None of these
120. The memory capacity in system is considered because the connecting processors are used \_\_\_\_\_:
- Network**
  - Internet
  - Intranet
  - None of these
121. Intercrosses arbitration system for multiprocessor shares a \_\_\_\_\_:
- Primary bus
  - Common bus**
  - Domain bus
  - All of these
122. Which is used to decentralize the decision to avail greater flexibility to the system that makes processor or microprocessor in a very short:
- Arbitration**
  - Centralized
  - Both a & b
  - None of these
123. Which is signal tells that an arbitration of the access bus is possible during interprocessing:
- DBA
  - BAP**
  - BNA
  - None of these
124. Which signal bus request :
- BAP
  - BNA
  - BAL
  - DBA**
125. Which signal on the bus indicates that request from process arbitration is to be processed:
- BAL
  - BREQ**
  - BM4
  - DBA
126. Which signal is exchange information by bus:
- BECH**
  - BM4
  - BAL
  - All of these

127. Which signal on bus applies +1 to the priority of resolution circuits of the arbitration designate a new arbitration:

- a. BM4
- b. BAL
- c. **BNA**
- d. DBA

128. Which signal create 3 lines of bus in which signals from the encoded number of processors:

- a. **BM1 to BM3**
- b. BAL
- c. Both
- d. None of these

129. Which signal request the validation signal make active if its logic level is 0 and validate signals from BM1 to BM3:

- a. BAL
- b. **BM4**
- c. BNA
- d. All of these

130. Which signal represents synchronization signal decided by interprocess arbitration with a certain delay or signal DMA:

- a. **BAL**
- b. BNA
- c. Both
- d. None of these

131. In which condition only one process holds a resource at a given time:

- a. **Mutual exclusion**
- b. Hold and wait
- c. Both
- d. None of these

132. In which condition one process holds the allocated resources and other waits for it:

- a. No preemption
- b. **Hold and wait**
- c. Mutual exclusion
- d. All of these

133. In which condition resource is not removed from a process holding:

- a. Synchronization problem
- b. **No preemption**
- c. Hold and wait
- d. None of these

134. In which condition busy waiting, programmer error, deadlock or circular wait occurs in interprocessing:

- a. **Synchronization problem**
- b. No preemption
- c. Hold and wait
- d. None of these

135. Mechanism can be referred to as adding a new facility to the system hence known as \_\_\_\_\_:

- a. Process
- b. **Arbitration**
- c. Both a & b
- d. None of these

136. Which is a mechanism used by the OS to ensure a systematic sharing of resources amongst concurrent resources:

- a. Process synchronous
- b. Process system
- c. **Process synchronization**
- d. All of these

137. \_\_\_\_\_ is basically sequence of instructions with a clear indication of beginning and end for updating shared variables

- a. **Critical section**
- b. Entry section
- c. Remainder section
- d. All of these

138. Which provides a direct hardware support to mutual exclusion

- a. **Test-and-set(TS)**
- b. Swap instruction
- c. Wait instruction
- d. Signal instruction

139. A process waiting to enter its critical section may have to wait for unduly\_\_\_\_\_:

- a. Short time or may have to wait forever
- b. **Long time or may have to wait forever**
- c. Short time or may have to wait for long time
- d. Long time or may have to wait for short time

140. Which is a modified version of the TS instruction which is designed to remove busy-waiting:

- a. Swap instruction
- b. Wait instruction
- c. Signal instruction
- d. **Both b & c**

141. PCB stands for:  
a. **Process control block**
142. \_\_\_\_\_ gets activated whenever the process encounters a busy condition code:  
a. **Wait instruction**  
b. Signal instruction  
c. Both a & b  
d. None of these
143. \_\_\_\_\_ are new and mutually exclusive operation:  
a. Wait instruction  
b. Signal instruction  
c. **Both a & b**  
d. None of these
144. \_\_\_\_\_ gets activated whenever a process leaves the critical region and the flag is set to false:  
a. Wait instruction  
b. **Signal instruction**  
c. Both a & b  
d. None of these
145. Which represent an abstraction of many important ideas in mutual exclusion:  
a. Process synchronous  
b. Process system  
c. **Semaphores**  
d. All of these
146. A semaphore is a \_\_\_\_\_ integer variable upon which two atomic operations wait and signal are defined:  
a. Negative integer  
b. **Non- Negative integer**  
c. Positive integer  
d. None of these
147. Which operation is executed as soon as a process exits from a critical section:  
a. Wait  
b. **Signal**  
c. Both a & b  
d. None of these
148. CCR stands for:  
a. **Conditional critical region**
149. \_\_\_\_\_ is a control structure in a high-level programming language:  
a. CPU  
b. ALU  
c. DDR  
d. **CCR**
150. The exclusion between processes is ensured by a third semaphore called \_\_\_\_\_:  
a. **Mutex**  
b. Mutual  
c. Memory  
d. All of these
151. \_\_\_\_\_ semaphore provides mutual exclusion for accesses to the buffer pool and is initialized to the value:  
a. **Mutex**  
b. Mutual  
c. Memory  
d. All of these
152. Which processes access and manipulate the shared data concurrently:  
a. Micro processes  
b. **Several processes**  
c. Both  
d. None of these
153. Which section is basically a sequence of instruction with a clear indication of beginning and end for updating shared variables:  
a. Racing section  
b. **Critical section**  
c. Both  
d. None of these
154. In which section only one process is allowed to access the shared variable and all other have to wait:  
a. **Critical section**  
b. Racing section  
c. Entry section  
d. Remainder section
155. Which are the problem of critical section:  
a. Mutual exclusion  
b. Progress  
c. Bounded wait  
d. **All of these**
156. Which section refer to the code segment of a process that is executed when the process intends to enter its critical section:  
a. Critical section  
b. **Entry section**  
c. Reminder section  
d. None of these

157. Which section refer to the code segment where a shared resource is accessed by the process:

- a. Reminder section
- b. Entry section
- c. Both
- d. None of these**

158. Which section is the remaining part of a process's code:

- a. Racing section
- b. Critical section
- c. Entry section
- d. Reminder section**

159. How many conditions for controlling access to critical section:

- a. 2
- b. 4
- c. 3**
- d. 5

160. Which instruction provides a direct hardware support to mutual exclusion:

- a. SP instruction
- b. TS instruction**
- c. Both
- d. None of these

161. Which instruction also improves the efficiency of the system:

- a. Swap instruction
- b. TS instruction**
- c. Both
- d. None of these

162. Which instruction allows only one concurrent process to enter the critical section:

- a. RP instruction
- b. SP instruction
- c. TS instruction**
- d. None of these

163. Which section problem can be solved simply in a uniprocessor environment if the we are able to prevent the occurrence of interrupt during the modification of a shared variable:

- a. Entry section
- b. Critical section**
- c. Non-critical section
- d. None of these

164. The problem of readers and writers was first formulated by\_\_\_\_\_:

- a. P.J. Courtois
- b. F.Heymans
- c. D.L. Parnas
- d. All of these**

165. Which is a situation in which some process wait for each other's actions indefinitely:

- a. Operating system
- b. Deadlock**
- c. Mutex
- d. None of these

166. \_\_\_\_\_system handles only deadlocks caused by sharing of resources in the system:

- a. Operating system**
- b. Deadlock
- c. Mutex
- d. None of these

167. A deadlocks occurs when the how many conditions are met:

- a. 1
- b. 2
- c. 3
- d. 4**

168. Which are the characteristics of deadlocks:

- a. Mutual exclusion
- b. Hold and wait
- c. No pre-emption
- d. Circular wait
- e. All of these**

169. RAG stands for:

- a. **Resource allocation graph**

170. How many events concerning RAG can occur in a system:

- a. 1
- b. 2
- c. 3**
- d. 4

171. Which are the events concerning RAG can occur in a system:

- a. Request for a resource
- b. Allocation of a resource
- c. Release of resource
- d. All of these**

172. How many methods for handling deadlocks:  
 a. 1                      b. 2  
 c. 3                      d. 4
173. Which are the method for handling deadlocks:  
 a. Deadlock prevention  
 b. Deadlock avoidance  
 c. Deadlock detection  
**d. All of these**
174. How many condition that should be met in order to produce a deadlock:  
 a. 2                      b. 4  
 c. 6                      d. 8
175. Which are the condition that should be met in order to produce a deadlock:  
 a. Mutual exclusion    b. Hold and Wait  
 c. No preemption  
**d. Circular wait        e. All of these**
176. In protocol each process can make a request only in an \_\_\_\_\_:  
 a. **Increasing order**    b. Decreasing order  
 c. Both a & b            d. None of these
177. In protocol above mentioned \_\_\_\_\_ protocol are used then the circular wait-condition can not hold:  
 a. 1                      b. 2  
 c. 3                      d. 4
178. Which state refers to a state that is not safe not necessarily a deadlocked state:  
 a. Safe state            b. **Unsafe state**  
 c. Both a & b            d. None of these
179. \_\_\_\_\_ a direct arrow is drawn from the process to the resource rectangle to represent each pending resource request:  
 a. TS                    b. SP  
 c. CCR                  d. **RAG**
180. The attributes of a file are:  
 a. Name                b. Identifier  
 c. Types                d. Location  
 e. Size                  f. Protection  
 g. Time, date and user identification  
**h. All of these**
181. The various file operation are:  
 a. Crating a file        b. Writing a file  
 c. Reading a file  
 d. Repositioning within a file  
 e. Deleting a file truncating a file  
**f. All of these**
182. Which operations are to be performed on a directory are:  
 a. Search for a file    b. Create a file  
 c. Delete a file        d. List a directory  
 e. Rename a file  
 f. Traverse the file system  
**g. All of these**
183. Which memory is assembled between main memory and CPU:  
 a. Primary memory    b. **Cache memory**  
 c. Both a & b            d. None of these
184. Which is considered as semi-conductor memory , which is made up of static RAM:  
 a. Primary memory    b. **Cache memory**  
 c. Both a & b            d. None of these
185. Which is one of the important I/O devices and is most commonly used as permanent storage device in any processor:  
 a. Soft disk            b. **Hard disk**  
 c. Both a & b            d. None of these
186. \_\_\_\_\_ can read any printed character by comparing the pattern that is stored in the computer:  
 a. SP                    b. CCR  
 c. RAG                  d. **OCR**
187. Which system is a typical example of the readers and writers problem:  
**a. Airline reservation system**  
 b. Airport reservation system  
 c. Both  
 d. None of these
188. Which lock can arise when two processes wait for phone calls from one another:  
 a. Spine lock            b. **Dead lock**  
 c. Both                  d. None of these
189. Which lock is more serious than indefinite postponement or starvation because it affect more than one job:  
 a. **Deadlock**            b. Spinelock  
 c. Both                  d. None of these