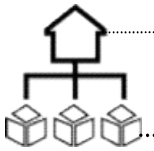

Practice Problem

1. **QUESTION: ASCII stands for**
   a) American Stable Code for International Interchange
   b) American Standard Case for Institutional Interchange
   c) American Standard Code for Information Interchange
   d) American Standard Code for Interchange Information
2. **QUESTION: The memory which is programmed at the time it is manufactured**
   a) POM b) RAM c) PROM d) EPROM
3. **QUESTION: Which of the following memory medium is not used as main memorysystem?**
   a) magnetic core b) semiconductor c) magnetic tape d) both a and b
4. **QUESTION: A digital computer did not score over, an analog computer in terms of**
   a) speed b) accuracy c) reliability d) cost
5. **QUESTION: Which of the following is the first generation of computer?**
   a) EDSAC b) IBM-1401 c) CDC-1604 d) ICL-2900
6. **QUESTION: Chief component of first generation computer was**
   a) transistors b) vacuum tubes and valves
   c) integrated circuits d) none of them
7. **QUESTION: Human beings are referred to as Homosapinens, which device is called Silicon Sapiens?**
   a) monitor b) hardware c) robot d) computer
8. **QUESTION: Registers, which are partially visible to users and used to hold conditional, are known as**
   a) PC b) memory address register
   c) general purpose register d) flags
9. **QUESTION: An error in software or hardware is called a bug. What is the alternative computer jargon for it?**
   a) leech b) sued c) slug d) glitch
10. **QUESTION: One of the main feature that distinguish microprocessors from micro-computers is**
    a) words are usually larger in microprocessors
    b) words are shorter in microprocessors
    c) microprocessors does not contain I/O devices
    d) exactly the same as the machine cycle time

11. QUESTION: Which was the world's first minicomputer and when was it introduced?

a) PDP-I, 1958 b) IBM System/36, 1960

c) PDP-II, 196 d) VAX 11/780, 1962

12. QUESTION: FORTRAN is

a) File Translation b) Format Translation

c) Formula Translation d) Floppy Translation

13. QUESTION: Modern Computer are very reliable but they are not

a) fast b) powerful c) infallible d) cheap

14. QUESTION: Which of the following required large computer memory?

a) imaging b) graphics c) voice d) all of them

15. QUESTION: UNIVAC is

a) Universal Automatic Computer b) Universal Array Computer

c) Unique Automatic Computer d) Unvalued Automatic Computer

16. QUESTION: EEPROM stands for

a) Electrically Erasable Programmable Read Only Memory

b) Easily Erasable Programmable Real Only Memory

c) Electronic Erasable Programmable Read Only Memory

d) none of them

17. QUESTION: Super Computer was invented by

a) J.H. Van Tassel b) J.C Perrier c) W.L. Judson d) A.J. Garnering

18. QUESTION: A term associated with the comparison of processing speeds of different computer system is

a) EFTS b) MPG c) MIPS d) CFPS

19. QUESTION: CD-ROM stands for

a) Compactable Read Only Memory

b) Compact Data Read Only Memory

c) Compactable Disk Read Only Memory

d) Compact Disk Read Only Memory

20. QUESTION: Second Generations computers were developed during

a) 1949 to 1955 b) 1956 to 1965

c) 1965 to 1970 d) 1970 to 1990

21. QUESTION: Which of the following code used in present day computing was developed by IBM Corporation?

a) ASCII b) Hollerith Code

c) Baudot Code d) EBCDIC Code

22. QUESTION: The processes of starting or restarting a computer system by loading instructions from a secondary storage device into the completer memory is called

a) duping b) booting
c) padding d) all of them

23. QUESTION: ALU is

a) Arithmetic Logic Unit b) Array Logic Unit
c) Application Logic Unit d) none of them

24. QUESTION: Personal computers use a number of chips mounted on a main circuit board. What is the common name for such boards?

a) daughter board b) motherboard
c) father board d) breadboard

25. QUESTION: The special files of DOS are

a) COM b) EXE
c) BATCH d) all of them

26. QUESTION: Who invented the microprocessor?

a) Marcian E Huff b) Herman H Goldstein
c) Joseph Jacquard d) all of them

27. QUESTION: VGA is

a) Video Graphics Array
b) Visual Graphics Array
c) Volatile Graphics Array
d) Video Graphics Adapter

28. QUESTION: What is the latest write-once optical storage media?

a) digital paper b) magneto-optical disk
c) WORM disk d) CD-ROM disk

29. QUESTION: One computer that is not considered a portable computer is

a) minicomputer b) a laptop computer
c) both a and b d) none of them

30. QUESTION: Which of the devices can be used to directly image printed text?

a) OCR b) OMR c) MICR d) all of them

31. QUESTION: What is meant by a dedicated computer?

a) which is used by one person only b) which is assigned one and only task
c) which uses one kind of software d) which is meant for application software

32. QUESTION: The accuracy of the floating-point number representable in two 16-bit words of a computer is approximately

a) 16 digits b) 6 digits

c) 9 digits d) all of them

33. QUESTION: The output quality of a printer is measured my

a) dot per inch b) dot per s. inch

c) dots printed per unit time d) all of them

34. QUESTION: Which of the following is the unit to express the memory of a computer?

a) complier b) bus c) byte d) clone

35. QUESTION: A dumb terminal has

a) an embedded microcomputer

b) extensive memory

c) independent processing

d) a keyboard and screen

36. QUESTION: In analog computer

a) input is first converted to digital form

b) input is never converted to digital form

c) output is displayed in digital form

d) all of them

37. QUESTION: A computer program that converts an entire program into machine language is called a/an

a) interpreter b) simulator

c) compiler d) commander

38. QUESTION: Before a disk drive can access any sector record, a computer program has to provide the record's disk address. What information does this address specify?

a) track number b) sector number

c) surface number d) all of them

39. QUESTION: Plotter accuracy is measured in terms of repeatable and

a) buffer size b) resolution

c) vertical dimensions d) intelligence

40. QUESTION: As integrated circuit is

a) a complicated circuit b) an integrating device

c) much costlier than a single transistor d) fabricated on a tiny silicon chip

41. QUESTION: A computer program that translates one program instructions at a time into machine language is called a/an

a) interpreter b) CPU

c) compiler d) simulator

42. QUESTION: The ALU of a computer responds to the commands coming from

a) primary memory b) control section

c) external memory d) cache memory

43. QUESTION: Most important advantages of an IC is its

a) easy replacement in case of circuit failure
b) extremely high reliability
c) reduced cost
d) low powers consumption

44. QUESTION: Who designed the first electronics computer - ENIAC?

a) Van-Neumann
b) Joseph M. Jacquard
c) J. Presper Eckert and John W Mauchly
d) all of them

45. QUESTION: The act of retrieving existing data from memory is called

a) read-out b) read from
c) read d) all of them

46. QUESTION: Which of the following is not a programming language?

a) basic b) FORTRAN
c) LASER d) PASCAL

47. QUESTION: All modern computer operate on

a) information b) floppies c) data d) word

48. QUESTION: Regarding a VDU, which statement is more correct?

a) it is an output device b) it is an input device
c) it is a peripheral device d) it is hardware item

49. QUESTION: In the third Generation of computers

a) distributed data processing first became popular
b) an operating system was first developed
c) high level procedural language were first used
d) online real time systems first become popular

50. QUESTION: EBCDIC stands for

a) Extended Binary Coded Decimal Interchange Code
b) Extended Bit Code Decimal Interchange Code
c) Extended Bit Case Decimal Interchange Code
d) Extended Binary Case Decimal Interchange Code

51. QUESTION: Which of the following memories must be refreshed many times per second?

a) static RAM b) dynamic RAM
c) EPROM d) ROM

52. QUESTION: Two kinds of main memory are

a) primary and secondary
b) random and sequential
c) ROM and RAM
d) all of them

53. QUESTION: Easily relocatable language is

a) machine language
b) assembly language
c) high level language
d) medium level language

54. QUESTION: An integrated circuit is

a) a complicated circuit
b) an integrating device
c) much costlier than a single transistor
d) fabricated on a tiny silicon chip

55. QUESTION: Which of the following is called low level languages?

a) machine language
b) assembly language
c) both a and b
d) none of them

56. QUESTION: Most important advantages of an IC is its

a) easy replacement in case of circuit failure
b) extremely high reliability
c) reduced cost
d) lower power consumption

57. QUESTION: The latest PC keyboards use a circuit that senses the movement by the change in its capacitance

a) capacitance keyboard
b) mechanical keyboard
c) qwerty keyboard
d) dvorak keyboard

58. QUESTION: The first electronic computer in the world was

a) UNIVAC
b) EDVAC
c) ENIAC
d) all of them

59. QUESTION: A complier is a translating program which

a) translates instruction of a high language into machine language
b) translates entire source program into machine language program
c) it is not involved in program's execution
d) all of them

60. QUESTION: Binary circuit elements have

a) one stable state
b) two stable state

c) three stable state d) none of them

61. QUESTION: Which of the following is machine independence program?

a) high level language b) low level language

c) assembly language d) machine language

62. QUESTION: Which statement is valid?

a) 1 KB = 1024 bytes b) 1 MB = 2048 bytes

c) 1 MB = 1000 kilobytes d) 1 KB = 1000 bytes

63. QUESTION: Offline device is

a) a device which is not connected to CPU

b) a device which is connected to CPU

c) a direct access storage device

d) an I/O device

64. QUESTION: Which statement is valid about computer program?

a) it is understood by a computer b) it is understood by programmer

c) it is understood user d) all of them

65. QUESTION: Which is the limitation of high level language?

a) lower efficiency b) machine dependence

c) machine level coding d) none of them

66. QUESTION: Which of the following registers is loaded with the contents of the memory location pointed by the PC?

a) memory address registers b) memory data registers

c) instruction register d) program counter

67. QUESTION: An error in computer data is called

a) chip b) bug c) CPU d) storage

68. QUESTION: Which of the following terms is the most closely related to main memory?

a) not volatile b) permanent

c) control unit d) Temporary

69. QUESTION: An online backing storage system capable of storing larger quantities of data of

a) CPU b) memory

c) mass storage d) secondary storage

70. C programs are converted into machine language with the help of _____.

a) An Editor b) A compiler

c) An operating system d) None of the above

71. C was primarily developed as

a) System programming language b) General purpose language
c) Data processing language d) None of the above.

72. A C variable cannot start with
a) An alphabet
b) A number
c) A special symbol other than underscore
d) both (b) and (c)

73. Which of the following is allowed in a C Arithmetic instruction
a) [] b) {}
c) () d) None of the above

74. Which is the right way to declare constant in C?
a) int constant var =10; b) int const var = 10;
c) const int var = 10; d) B & C Both

75. Which one of the following sentences is true ?
a) The body of a while loop is executed at least once.
b) The body of a do … while loop is executed at least once.
c) The body of a do … while loop is executed zero or more times.
d) A for loop can never be used in place of a while loop.

76. The statement print f ("%d", 10 ?0 ?5 : 1 : 12); will print?
a) 10 b) 0 c) 12 d) 1

77. The statement printf("%c", 100); will print?
a) prints 100 b) print garbage
c) prints ASCII equivalent of 100 d) None of the above

78. Standard ANSI C recognizes _____ number of keywords?
a) 30 b) 32 c) 24 d) 36

79. A C variable cannot start with
a) A number b) A special symbol other than underscore
c) Both of the above d) An alphabet

80. Which one of the following is not a valid identifier?
a) _examveda b) 1examveda
c) exam_veda d) examveda

81. Which of the following is not a correct variable type?
a) float b) real c) int d) double

82. Find the output of the following program. void main() { int i=01289; printf("%d", i); }
a) 0289 b) 1289 c) 713 d) Syntax error

83. What is the difference between a declaration and a definition of a variable?

a) Both can occur multiple times, but a declaration must occur first.
b) A definition occurs once, but a declaration may occur many times.
c) Both can occur multiple times, but a definition must occur first.
d) A declaration occurs once, but a definition may occur many times.

84. Which of the following shows the correct hierarchy of arithmetic operations in C
a) / + * – b) * – / + c) + – / * d) * / + –

85. What is an array?
a) An array is a collection of variables that are of the dissimilar data type.
b) An array is a collection of variables that are of the same data type.
c) An array is not a collection of variables that are of the same data type.
d) None of the above.

86. What is right way to Initialization array?
a) int num[6] = { 2, 4, 12, 5, 45, 5 } ;
b) int n{} = { 2, 4, 12, 5, 45, 5 } ;
c) int n{6} = { 2, 4, 12 } ;
d) int n(6) = { 2, 4, 12, 5, 45, 5 } ;

87. An array elements are always stored in _____ memory locations.
a) Sequential b) Random
c) Sequential and Random d) None of the above

88. What is the right way to access value of structure variable book{ price, page }?
a) printf("%d%d", book.price, book.page);
b) printf("%d%d", price.book, page.book);
c) printf("%d%d", price::book, page::book);
d) printf("%d%d", price->book, page->book);

89. What will be the output of the following statements ?
int a = 4, b = 7,c; c = a = = b; printf("%i",c);
a) 0 b) error c) 1 d) garbage value

90. What will be the output of the following statements ?
int a = 5, b = 2, c = 10, i = a>b
void main()
{ printf("hello"); main(); }
a) 1 b) 2
c) infinite number of times d) none of these

91. What will be the output of the following statements ?
int x[4] = {1,2,3}; printf("%d %d %D",x[3],x[2],x[1]);
a) 03%D b) 000 c) 032 d) 321

92. What will be the output of the following program ?

```
#include
void main()
{ int a = 2;
switch(a)
{ case 1:
printf("goodbye"); break;
case 2:
continue;
case 3:
printf("bye");
}
}
```

a) error b) goodbye c) bye d) byegoodbye

93. Bitwise operators can operate upon?

a) double and chars b) floats and doubles
c) ints and floats d) ints and chars

94. What is C Tokens?

a) The smallest individual units of c program
b) The basic element recognized by the compiler
c) The largest individual units of program
d) A & B Both

95. What is function?

a) Function is a block of statements that perform some specific task.
b) Function is the fundamental modular unit. A function is usually designed to perform a specific task.
c) Function is a block of code that performs a specific task. It has a name and it is reusable
d) All the above

96. The Default Parameter Passing Mechanism is called as

a) Call by Value b) Call by Reference
c) Call by Address d) Call by Name

97. The _____ memory allocation function modifies the previous allocated space.

a) calloc b) free c) malloc d) realloc

98. What will be the output of the following program ?

```
#include
void main()
{
```

```
int a = 36, b = 9;
printf("%d",a>>a/b-2);
}
```

a) 9 b) 7 c) 5 d) none of these

99. int testarray[3][2][2] = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12};
What value does testarray[2][1][0] in the sample code above contain?

a) 11 b) 7 c) 5 d) 9

100. What will happen if in a C program you assign a value to an array element whose subscript exceeds the size of array?

a) The element will be set to 0.
b) The compiler would report an error.
c) The program may crash if some important data gets overwritten.
d) The array size would appropriately grow.

101.

```
main()
{
struct
{
int i;
}xyz;
(*xyz)->i=10;
printf("%d",xyz.i);
}
```

What is the output of this program?

a) program will not compile b) 10
c) god only knows d) address of I

102. Which one is not a reserve keyword in C Language?

a) auto b) main c) case d) register

103. Prototype of a function means _____

a) Name of Function b) Output of Function
c) Declaration of Function d) Input of a Function

104. If the two strings are identical, then *strcmp()* function returns

a) -1 b) 1 c) 0 d) Yes

105. Which of the following function is more appropriate for reading in a multi-word string?

a) printf() b) scanf() c) gets() d) puts()

106. Which of the following operations can be performed on the file "NOTES.TXT" using the below code?

FILE *fp;
fp = fopen("NOTES.TXT", "r+");

a) Reading b) Writing c) Appending d) Read and Write

107. Out of fgets() and gets() which function is safe to use?

a) gets() b) fgets() c) == d) ==

108. Specify the 2 library functions to dynamically allocate memory?

a) *malloc()* and *memalloc()* b) *malloc()* and *memalloc()*
c) *malloc()* and *calloc()* d) *memalloc()* and *faralloc()*

109. Which of the following best describes the useful criterion for comparing the efficiency of algorithms?

a) Time b) Memory c) Both of the above d) None of the above

110. How is time complexity measured?

a)By counting the number of statements in an algorithm
b)By counting the number of primitive operations performed by the algorithm on a given input size
c)By counting the size of data input to the algorithm
d)None of the above

111. Which of the following case does not exist in complexity theory?

a) Best case b) Worst case c) Average case d) Null case

112. Which of the following does NOT belong to the family of notations?

a)Big (O) b)Big (Ω) c)Big (θ) d)Big (⋈)

113. Which of the following covers the 'worst' case scenario?

a)Big (O) b)Big (Ω) c)Big (θ) d)All of the above

114. What is the time complexity of following code:

```
    int i, j, k = 0;
for (i = n / 2; i<= n; i++) {
  for (j = 2; j <= n; j = j * 2) {
    k = k + n / 2;
  }
}
```

a) O(n) b) O(nLogn) c) O(n^2) d) O(n^2Logn)

115. The complexity of linear search algorithm is _____

a) O(n) b) O(log n) c) $O(n^2)$ d) O(n log n)

116. The Worst case occur in linear search algorithm when _____

a) Item is somewhere in the middle of the array
b) Item is not in the array at all

c) Item is the last element in the array
d) Item is the last element in the array or is not there at all

117. Which is used to measure the Time complexity of an algorithm Big O notation?
a) describes limiting behaviour of the function
b) characterises a function based on growth of function
c) upper bound on growth rate of the function
d) all of the mentioned

118. If for an algorithm time complexity is given by O(n) then the complexity of it is
a) constant b) linear
c) exponential d) none of the mentioned

119. The time complexity of binary search is given by _____
a) constant b) quardratic
c) exponential d) none of the mentioned

120. When does the ArrayIndexOutOfBoundsException occur?
a) Compile-time b) Run-time
c) Not an error d) Not an exception at all

121. Which of the following data structure can't store the nonhomogeneous data elements?
a) Arrays b) Stacks c) Records d) None of the above

122. What are the advantages of arrays?
a) Objects of mixed data types can be stored
b) Elements in an array cannot be sorted
c) Index of first element of an array is 1
d) Easier to store elements of same data type

123. What are the disadvantages of arrays?
a) Data structure like queue or stack cannot be implemented
b) There are chances of wastage of memory space if elements inserted in an array are lesser than the allocated size
c) Index value of an array can be negative
d) Elements are sequentially accessed

124. Elements in an array are accessed _____
a) randomly b) sequentially c) exponentially d) logarithmically

125. Process of inserting an element in stack is called _____
a) Create b) Push c) Evaluation d) Pop

126. In a stack, if a user tries to remove an element from empty stack it is called _____
a) Underflow b) Empty collection c) Overflow d) Garbage Collection

127. Pushing an element into stack already having five elements and stack size of 5, then stack becomes

a) Overflow b) Crash c) Underflow d) User flow

128. What is the value of the postfix expression 6 3 2 4 + – *:

a) 1 b) 40 c) 74 d) -18

129. After the completion of all operation, the number of elements present in stack are

a) 1 b) 2 c) 3 d) 4

130. A linear list of elements in which deletion can be done from one end (front) and insertion can take place only at the other end (rear) is known as a ?

a) Queue b) Stack c) Tree d) Linked list

131. The data structure required for Breadth First Traversal on a graph is?

a) Stack b) Array c) Queue d) Tree

132. Circular Queue is also known as _____

a) Ring Buffer b) Square Buffer c) Rectangle Buffer d) Curve Buffer

133. If the elements "A", "B", "C" and "D" are placed in a queue and are deleted one at a time, in what order will they be removed?

a) ABCD b) DCBA c) DCAB d) ABDC

134. The concatenation of two list can performed in O(1) time. Which of the following variation of linked list can be used?

a) Singly linked list b) Doubly linked list

c) Circular doubly linked list d) Array implementation of list

135. Linked lists are not suitable to for the implementation of?

a) Insertion sort b) Radix sort

c) Polynomial manipulation d) Binary search

136. Linked list is considered as an example of _____ type of memory allocation.

a) Dynamic b) Static c) Compile time d) Heap

137. What differentiates a circular linked list from a normal linked list?

a) You cannot have the 'next' pointer point to null in a circular linked list

b) It is faster to traverse the circular linked list

c) You may or may not have the 'next' pointer point to null in a circular linked list

d) Head node is known in circular linked list

138. To represent hierarchical relationships between elements, which data structure is suitable?

a) Graph b) Tree c) Dequeue d) Priority

139. Tree is more suitable for represent hierarchical relationships . Its store data hierarchically in memory.

Evaluate the following and choose the correct answer.
a/b+c*d where a=4, b=2, c=2, d=1.

a) 1 b) 4 c) 5 d)2

140. How many stacks are required for evaluation of prefix expression?

a) one b) two c) three d) four

141. Which forms are based on the concept of functional dependency:

a) 1NF b) 2NF c) 3NF d) 4NF

142. While evaluating a prefix expression, the string is read from?

a) left to right b) right to left c) center to right d) center to left to right

143. In the ..... traversal we process all of a vertex's descendants before we move to an adjacent vertex.

a) Depth Limited b) With First c) Breadth First d) Depth First

144. The view of total database content is

a) Conceptual view. b)Internal view. c) External view. d) Physical View.

145. In the relational model, cardinality is termed as:

a) A number of tuples. b) A number of attributes.
c) A number of tables. d) A number of constraints.

146. Relational calculus is a

a)Procedural language. b) Non- Procedural language.
c) Data definition language. d) High-level language.

147. Cartesian product in relational algebra is

a) a Unary operator. b)a Binary operator.
c) a Ternary operator. d)not defined.

148. Which of the following case does not exist in complexity theory?

a) Best case b) Worst case c) Average case d) Null case

149. Which of the following does NOT belong to the family of notations?

a)Big (O) b)Big (Ω) c)Big (θ) d)Big (⋈)

150. ODBC stands for

a) Object Database Connectivity. b) Oral Database Connectivity.
c) Oracle Database Connectivity. d) Open Database Connectivity.

151. A logical schema

a) is the entire database.
b) is a standard way of organising information into accessible parts.
c) describes how data is actually stored on disk.
d) both (A) and (C)

152. Architecture of the database can be viewed as

a) two levels. b) four levels. c) three levels. d) one level.

153. In a relational model, relations are termed as

a) Tuples. b) Attributes c) Tables. d) Rows.

154. Which of the following is not a database model

a) Network Database Model b) Relational Database Model

c) Object Oriented Database Model d) None

155. The database schema is written in

a) HLL b) DML c) DDL d) DCL

156. In the architecture of a database system external level is the

a) physical level. b) logical level. c) conceptual level d) view level

157. An entity set that does not have sufficient attributes to form a primary key is a

a) strong entity set. b) weak entity set. c) simple entity set. d) primary entity set

158. In case of entity integrity, the primary key maybe

a) not Null b) Null c) both Null d) any value

159. The database environment has all of the following components except:

a) users. b) separate files.

c) database. d) database administrator.

160. The property/properties of a database is/are:

a) It is an integrated collection of logically related records.

b) It consolidates separate files into a common pool of data records.

c) Data stored in a database is independent of the application programs using it.

d) All of the above.

161. The DBMS language component which can be embedded in a program is

a) The data definition language (DDL). b) The data manipulation language (DML).

c) The database administrator (DBA). d) A query language.

162. Count function in SQL returns the number of

a) values. b) distinct values. c) groups. d) columns.

163. Which one of the following statements is false?

a) The data dictionary is normally maintained by the database administrator.

b) Data elements in the database can be modified by changing the data dictionary.

c) The data dictionary contains the name and description of each data element.

d) A data dictionary is a tool used exclusively by the database administrator.

164. E-R model uses this symbol to represent a weak entity set?

a) Dotted rectangle. b) Diamond

c) Doubly outlined rectangle d) None of these

165. SET concept is used in:

a) Network Model b) Hierarchical Model
c) Relational Model d) None of these

166. Relational Algebra is
a) Data Definition Language. b) Meta Language
c) Procedural Query Language d) None of the above

167. Key to represent the relationship between tables is called
a) Primary key b) Secondary Key
c) Foreign Key d) None of these

168. _____ produces the relation that has attributes of R1 and R2
a) Cartesian product b) Difference c) Intersection d) Product

169. Which of the following are the properties of entities?
a) Groups b) Table c) Attributes d) Switchboards

170. Which of the following is correct:
a) a SQL query automatically eliminates duplicates.
b) SQL permits attribute names to be repeated in the same relation.
c) a SQL query will not work if there are no indexes on the relations
d) None of these

171. It is better to use files than a DBMS when there are
a) Stringent real-time requirements. b) Multiple users wish to access the data.
c) Complex relationships among data. d) All of the above.

172. Which of the following is a valid SQL type?
a) CHARACTER b) NUMERIC c) FLOAT d) All of the above

173. Which of the following is a legal expression in SQL?
a) SELECT NULL FROM EMPLOYEE;
b) SELECT NAME FROM EMPLOYEE;
c) SELECT NAME FROM EMPLOYEE WHERE SALARY = NULL;
d) None of the above

174. Which of the following is a comparison operator in SQL?
a) = b) LIKE c) BETWEEN d) All of the above

175. A set of possible data values is called
a) attribute. b) degree. c) tuple. d) domain.

176. A data dictionary is a special file that contains:
a) The name of all fields in all files. b) The width of all fields in all files.
c) The data type of all fields in all files. d) All of the above.

177. An instance of relational schema R (A, B, C) has distinct values of A, including NULL values. Which one of the following is true?
a) A is a candidate key b) A is not a candidate key
c) A is a Primary Key d) Both (A) and (C)

178. The natural join is equal to:

a) Cartesian Product

b) Combination of Union and Cartesian product

c) Combination of selection and Cartesian product

d) Combination of projection and Cartesian product

179. The _____ operator is used to compare a value to a list of literals values that have been specified.

a) BETWEEN b) ANY c) IN d) ALL

180. A data manipulation command the combines the records from one or more tables is called

a) SELECT b) PROJECT c) JOIN d) PRODUCT

181. In E-R diagram generalisation is represented by

a) Ellipse b) Dashed ellipse c) Rectangle d) Triangle

182. A table joined with itself is called

a) Join b) Self Join c) Outer Join d) Equal Join

183. __ data type can store unstructured data

a) RAW b) CHAR c) NUMERIC d) VARCHAR

184. Abbreviate ACID?

a) Atomicity, Consistency, Isolation, Durability

b) Atomicity, Concurrency, Isolation, Duplicity

c) Aggregation, Consistency, Isolation, Durability

d) Atomicity, Consistency, Identity, Durability

185. Which of the join operations do not preserve non matched tuples?

a) Left outer join b) Right outer join c) Inner join d) Natural join

186. What type of join is needed when you wish to include rows that do not have matching values?

a) Equi-join b) Natural join c) Outer join d) All of the mentioned

187. In SQL the statement select * from R, S is equivalent to

a) Select * from R natural join S b) Select * from R cross join S

c) Select * from R union join S d) Select * from R inner join S

188. A _____ consists of a sequence of query and/or update statements.

a) Transaction b) Commit c) Rollback d) Flashback

189. Which of the following makes the transaction permanent in the database?

a) View b) Commit c) Rollback d) Flashback

190. In case of any shut down during a transaction before commit which of the following statements is done automatically?

a) View b) Commit c) Rollback d) Flashback

191. Which is a bottom-up approach to database design that design by examining the relationship between attributes:

a) Functional dependency b) Database modeling
c) Normalization d) Decomposition

192. In the _____ normal form, a composite attribute is converted to individual attributes.

a) First b) Second c) Third d) Fourth

193. A table on the many side of a one to many or many to many relationship must:

a) Be in Second Normal Form (2NF) b) Be in Third Normal Form (3NF)
c) Have a single attribute key d) Have a composite key

194. Functional Dependencies are the types of constraints that are based on_____

a) Key b) Key revisited
c) Superset key d) None of the mentioned

195. We indicate roles in E-R diagrams by labeling the lines that connect _____ to _____

a) Diamond ,diamond b) Rectangle, diamond
c) Rectangle, rectangle d) Diamond, rectangle

196. Which of the following is an Open Source DBMS?

a) MySQL b) Microsoft SQL Server
c) Microsoft Access d) Oracle

197. OOPs is invented by _____

a)Andrea Ferro b)Dennis Ritchie c)Adele Goldberg d)Alan Kay

198. Which of following is shared structure of a set of similar objects

a)Method b)Class c)Inheritance d)None of Above

199. Which of following does not have a body

a)An Interface b)A Class
c)An Abstract Method d)none of above

200. In oops public, private & protected are

a)Classes b)Access Modifiers
c)Interfaces d)Method signature

201. A private member of a class is visible to

a)every where b)in sub class
c) members to same package d)only members of same class

202. Which of the following is an abstract data type?

a)Double b) String c)Int d) Class

203. Which of the following is not related to OOPS?

a)Class and Object b)Constructor and Destructor
c)Structure and Union d)Inheritance and Polymorphism

204. Wecan not create instance of

a)Anonymous class b)Nested class

c) Parent class d)Abstract class

205. Which of the following is correct for copy constructor?

a)The argument object is passed by reference
b)It can be defined with zero arguments
c)Used when an object is passed by value to a function
d)Used when a function returns an object

206. Which Feature of OOP encourages the code reusability?

a)Polymorphism b) Inheritance c) Abstraction d) Encapsulation

207. Which language doesn't support single level inheritance?

a)C language b)Java c)Kotlin d)C++

208. Which of the following is not the member of class?

a)Static function b) Friend function c) Const function d)Virtual function

209. Which of the following is a universal class for exception handling?

a)Object b) Errors c) Exceptions d)Maths

210. Which among the following handles the undefined class exception in the program?

a)ClassNotFound
b) NoClassException
c) ClassFoundException
d) ClassNotFoundException handles the undefined class exception in program

211. How many catch blocks can you use with a single Try block?

a) Only 2 b) Only 1
c) Maximum 256 d) As many as required

212. Which of the following is not a type of constructor?

a) Copy constructor b) Friend constructor
c) Default constructor d) Parameterized constructor

213. Which of the following statements is correct?

a) Base class pointer cannot point to derived class.
b) Derived class pointer cannot point to base class.
c) Pointers to derived classes cannot be created.
d) Pointer to base class cannot be created.

214. Which of the following term is used for a function defined inside a class?

a) Member Variable b) Member function
c) Class function d) Classic function

215. Which of the following concept of oops allows compiler to insert arguments in a function call if it is not specified?

a) Call by value b) Call by reference
c) Default arguments d) Call by pointer

216. Which of the following is correct about class and structure?

a) class can have member functions while structure cannot.
b) class data members are public by default while that of structure are private.
c) Pointer to structure or classes cannot be declared.
d) class data members are private by default while that of structure are public by default.

217. Which of the following concepts means waiting until runtime to determine which function to call?

a) Data hiding b) Dynamic casting c) Dynamic binding d) Dynamic loading

218. Which of the following is a mechanism of static polymorphism?
a) Operator overloading b) Function overloading
c) Templates d) All of the above

219. Which of the following is not a type of inheritance?
a) Multiple b) Multilevel c) Distributive d) Hierarchical

220. Which inheritance type is used in the class given below?
class A : public X, public Y
{}
a) Multilevel inheritance b) Multiple inheritance
c) Hybrid inheritance d) Hierarchical Inheritance

221. What is correct about the static data member of a class?
a) A static member function can access only static data members of a class.
b) A static data member is shared among all the object of the class.
c) A static data member can be accessed directly from *main()*.
d) Both A and B.

222. Which of the following statements is correct?
a) Class is an instance of an object. b) Object is an instance of a class.
c) Class is an instance of data type. d) None

223. In which of the following gates, the output is 1, if and only if at least one input is 1?
a) NOR b) AND c) OR d) NAND

224. The time required for a gate or inverter to change its state is called
a) Rise time b) Decay time c) Propagation time d) Charging time

225. The time required for a pulse to change from 10 to 90 percent of its maximum value is called
a) Rise time b) Decay time c) Propagation time d) Operating speed

226. What is the minimum number of two-input NAND gates used to perform the function of two input OR gate ?
a) One b) Two c) Three d) four

227. The number of full and half-adders required to add 16-bit numbers is
a) 8 half-adders, 8 full-adders b) 1 half-adder, 15 full-adders
c) 16 half-adders, 0 full-adders d) 4 half-adders, 12 full-adders

228. Which of the following statements is wrong ?
a) Propagation delay is the time required for a gate to change its state
b) Noise immunity is the amount of noise which can be applied to the input of a gate without causing the gate to change state
c) Fan-in of a gate is always equal to fan-out of the same gate
d) Operating speed is the maximum frequency at which digital data can be applied to a gate

229. Which of the following expressions is not equivalent to X' ?
a) X NAND X b) X NOR X c) X NAND 1 d) X NOR 1

230. Which of the following gates are added to the inputs of the OR gate to convert it to the NAND gate ?
a) NOT b) AND c) OR d) XOR

231. Which table shows the logical state of a digital circuit output for every possible combination of logical states in the inputs ?
a) Function table b) Truth table c) Routing table d) ASCII table

232. A demultiplexer is used to
a) Route the data from single input to one of many outputs
b) Perform serial to parallel conversion
c) Both (a) & (b)
d) Select data from several inputs and route it to single output

233. Parallel adders are
a) combinational logic circuits b) sequential logic circuits
c) both (a) and (b) d) None of these **Ans.:** a

234. The digital multiplexer is basically a combination logic circuit to perform the operation
a) AND-AND b) OR-OR c) AND-OR d) OR-AND

235. The output of NOR gate is
a) High if all of its inputs are high b) Low if all of its inputs are low
c) High if all of its inputs are low d) High if only of its inputs is low

236. A combinational circuit is one in which the output depends on the
a) input combination at the time
b) input combination and the previous output
c) input combination at that time and the previous input combination
d) present output and the previous output

237. The function of a multiplexer is
a) to decode information
b) to select 1 out of N input data sources and to transmit it to single channel
c) to transit data on N lines
d) to perform serial to parallel conversion

238. A combinational logic circuit which generates a particular binary word or number is
a) Decoder b) Multiplexer c) Encoder d) Demultiplexer

239. Adders
a) adds 2 bits
b) is called so because a full adder involves two half-adders
c) needs two input and generates two output
d) All

240. Which one of the following logic expressions is incorrect?
a) $1 \oplus 0 = 1$ b) $1 \oplus 1 \oplus 0 = 1$ c) $1 \oplus 1 \oplus 1 = 1$ d) $1 \oplus 1 = 0$

241. Extremely low power dissipation and low cost per gate can be achieved in:
a) MOS ICs b) C MOS ICs c) TTL ICs d) ECL ICs

242. If four 4 input multiplexers drive a 4 input multiplexer, we get a:
a) 16 input MUX b) 8 input MUX c) 4 input MUX d) 2 input MUX

243. Which of the following is not a form of memory ?
a) Instruction cache b) Instruction register
c) Instruction opcode d) Both (a) and (b)

244. Which memory is difficult to interface with processor ?
a) Static memory b) Dynamic memory
c) ROM d) None of these

245. Desirable characteristic(s) of a memory system is(are)
a) Speed and reliability b) Low power consumption
c) Durability and compactness d) All

246. The minimum time delay required between initiation of two successive memory operations is called
a) Memory cycle time b) Memory access time
c) Transmission time d) Fetch Time

247. For a memory system, the cycle time is
a) Same as the access time b) Longer than the access time
c) Shorter than the access time d) multiple of the access time

248. In comparison with static RAM memory, the dynamic RAM memory has
a) Lower bit density and higher power consumption
b) Higher bit density and low power consumption
c) Lower bit density and lower power consumption
d) None of these

249. Disadvantage of dynamic RAM over static RAM is
a) Higher power consumption
b) Variable speed
c) Need to refresh the capacitor charge every once in two milliseconds
d) Lower Packing density

250. Memory consisting of electronic circuits attached into silicon chip is known as
a) Magnetic core memory b) Semiconductor memory
c) Thin film memory d) None of these

251. A dynamic RAM consists of
a) 6 transistors b) 2 transistors and 2 capacitors
c) 1 transistor and 1 capacitor d) None of these

252. Which of the following is the internal memory of the system (computer) ?
a) CPU register b) Cache c) Main memory d) All of these

253. An advantage of memory interfacing is that
a) A large memory is obtained b) Effective speed of the memory is increased
c) The cost of the memory is reduced d) A volatile memory is obtained

254. Which of the following is/are advantages of virtual memory ?
a) Faster access to memory on an average.
b) Processes can be given protected address spaces.
c) Programs larger than the physical memory size can be run
d) All

255. Four memory chips of 16 x 4 size have their address bases connected together. The system will be of size
a) 64 x 64 b) 16 x 16 c) 32 x 16 d) 256 x 1

256. Which of the following statements is true ?
a) ROM is a Read / Write memory
b) PC points to the last instruction that was executed
c) Stack works on the principle of LIFO
d) All of above

257. Which of the following is used as storage locations both in the ALU and the control section of a computer ?
a) Accumulator b) Register c) Adder d) Decoder

258. The register used as a working area in CPU is
a) Program counter b) Instruction register
c) Instruction decoder d) Accumulator

259. The size of program counter (PC) is
a) 8 bits b) 12 bits c) 16 bits d) 32 bits

260. 8085 microprocessor has _____ hardware interrupts.
a) 2 b) 3 c) 4 d) 5

261. The register that stores all interrupt requests is :
a) Interrupt mask register b) Interrupt service register
c) Interrupt request register d) Status register

262. If link transmits 4000 frames per second and each slot has 8 bits, the transmission rate of circuit of this TDM is _____.
a) 64 Kbps b) 32 MbpS c) 32 Kbps d) 64 MbpS

263. Given the following statements :
i) Frequency Division Multiplexing is a technique that can be applied when thebandwidth of a link is greater than combined bandwidth of signals to be transmitted.
ii) Wavelength Division Multiplexing (WDM) is an analog multiplexing Technique tocombine optical signals.
iii) WDM is a Digital Multiplexing Technique.
iv) TDM is a Digital Multiplexing Technique.
a) I,ii,iii,iv are true b) I,ii,iii,iv are false
c) I,ii,iv true and iii false d) none

264. A pure ALOHA Network transmits 200 bit frames using a shared channel with 200 Kbps bandwidth. If the system (all stations put together) produces 500 frames per second, then the throughput of the system is _____.
a) 0.384 b) 0.184 c) 0.286 d) 0.586

265. Which of the following propositions is tautology?
a) (p v q)→q b) p v (q→p)
c) p v (p→q) d) Both (b) & (c)

266. Which of the proposition is p^ (~ p v q) is
a) A tautology b) A contradiction
c) Logically equivalent to p ^ q d) All of above

267. Which of the following is/are tautology?
a) a v b → b ^ c b) a ^ b → b v c c) a v b → (b → c) d) None of these

268. What can we correctly say about proposition P1:
P1 : (p v ٦q) ^ (q →r) v (r v p)
a) P1 is tautology
b) P1 is satisfiable
c) If p is true and q is false and r is false, the P1 is true
d) If p as true and q is true and r is false, then P1 is true

269. ٦(P → Q) is equivalent to

a) P ^ ⅂Q b) P ^ Q c) ⅂P v Q d) None of these

270. In propositional logic , which of the following is equivalent to p → q?

a) ~p → q b) ~p v q c) ~p v~ q d) p →q

271. HTML stands for?

a) Hyper Text Markup Language b) High Text Markup Language
c) Hyper Tabular Markup Language d) None of these

272. Which of the following statements is not correct ?

a) HTML is not screen precise formatting language.
b) HTML does not specify a logic.
c) DHTML is used for developing highly interactive web pages.
d) HTML is a programming language.

273. Which of the following tag is used to mark the beginning of a paragraph ?

a) <TD> b)
 c) <P> d) <TR>

274. The attribute of <form> tag

a) Method b) Action c) Both (a)&(b d) None of these

275. www is based on which model?

a) Local-server b) Client-server c) 3-tier d) None of these

276. Which of the following is a container?

a) <SELECT> b) <BODY> c) <INPUT> d) Both (a) and (b)

277. How can you open a link in a new browser window?

a) < a href = "url" target = "new"> b) <a href = "url" target= "_blank">
c) <a href = "url".new> d) <a href = "url" target ="open">

278. Which of the tag is used to creates a number list?

a) <LI> b) <OL> c) <LI> and <OL> d) None of these

279. What i s the correct HTML for adding a background color?

a) <background>yellow<Background> b) <body color = "yellow">
c) <body bg color = "yellow"> d) <body bg ="yellow">

280. How can you make an e-mail link?

a) <mail href +"xxx@y.com"> b) <a href ="mail to: xxx@y.com">
c) <a href = "xxx@y.com"> d) Both (b) and (c)

281. The web standard allows programmers on many different computer platforms to dispersed format and display the information server. These programs are called

a) Web Browsers b) HTML c) Internet Explorer d) None of these

282. With a single resource, deadlock occurs

a) if there are more than two processes competing for that resource
b) if there are only two processes competing for that resource
c) if there is a single process competing for that resource
d) none of these

283. A state is safe if the system can allocate resources to each process (up to its maximum) in some order and still avoid deadlock. Then

a) deadlocked state is unsafe
b) unsafe state may lead to a deadlock situation
c) deadlocked state is a subset of unsafe state
d) all of these

284. 'm' processes share 'n' resources of the same type. The maximum need of each process doesn't exceed 'n' and the sum all the their maximum needs is always less than m + n. In this set up

a) deadlock can never occur b) deadlock may occur
c) deadlock has to occur d) none of these

285. A system has 3 processes sharing 4 resources. If each process needs a maximum of 2 units, then

a) deadlock can never occur b) deadlock may occur
c) deadlock has to occur d) none of these

286. Data dictionary is

a) Large collection of data mostly stored in a computer system
b) The removal of noise errors and incorrect input from a database
c) The systematic description of the syntactic structure of a specific database. It describes the structure of the attributes the tables and foreign key relations hips.
d) None of these

287. Data warehouse is

a) The actual discovery phase of a knowledge discovery process
b) The stage of selecting the right data for a KDD process
c) A subject-oriented integrated time variant non-volatile collection of data in support of management
d) None of these

288. Data cleaning is

a) Large collection of data mostly stored in a computer system
b) The removal of noise errors and incorrect input from a database
c) The systematic description of the syntactic structure of a specific database. It describes the structure of the attributes of the tables and foreign key relationships.
d) None of these

289. The advantage of using prewritten software packages is

a) saves time and cost b) eliminates writing program
c) eliminates program testing d) all of these

290. The first step of the implementation phase is

a) select the computer b) announce the implementation project
c) implementation planning d) prepare physical facilities

291. AI systems that use neuron structures to, recognize patterns in data, is

a) neural network b) fuzzy logic c) intelligent agent d) genetic algorithms

292. AI systems that use approximate reasoning to process ambiguous data, is

a) neural network b) fuzzy logic c) intelligent agent d) genetic algorithms

293. Includes acquisition testing, training and conversion to a new system

a) computer industry b) implementation process
c) Hardware d) software

294. Maintenance, conversion, training and business position are examples. Select one answer

a) IS service b) end user resistance
c) conversion methods d) system testing

295. Modifying an operational system by adding Internet Web site access would be an example of
a) Documentation b) systems maintenance
c) system developments d) none of these

296. Planning and controlling data centre operations, is
a) operations management b) data center
c) development center d) information center

297. A business can prosper in rapidly changing markets while offering its customers individualized solutions to their needs through
a) strategic business use of internet technologies
b) virtual company
c) agile competitor
d) total quality mangement

298. _____ is not a software quality model.
a) McCall model b) Boehm model c) ISO 9000 d) ISO 9126

299. Which one of the following techniques is applied for usability testing?
a) White box b) Black box
c) Grey box d) All of the mentioned above

300. Testing of individual components by the developers are comes under _____
a) Integration testing b) Validation testing
c) Unit testing d) None of mentioned

301. the testing have been stopped When _____
a) the faults have been fixed b) all the tests run
c) the time completed d) the risk are resolved

302. _____is not Structural Testing?
a) Parallel b) Acceptance c) Stress d) Regression

303. Which one is the reputed testing standard?
a) QAI b) M Bridge awards c) ISO d) Microsoft

304. Testing which performed first is ---
a) Dynamic testing b) Black box testing
c) White box testing d) Static testing

305. Verification is _____
a) Making sure that it is what the user really wants
b) Checking that we are building the right system
c) Checking that we are building the system right
d) Performed by an independent test team

306. Which one is the main focus of acceptance testing.
a) testing the system with other systems b) testing for a business perspective
c) finding faults in the system d) testing the system with other systems

307. Full form of ITG.
a) individual testing group b) integration testing group
c) instantaneous test group d) independent test group

308. Software mistakes during coding are known as _____
a) Errors b) Bugs c) Failures d) defects

309. Which of the following is/are White box technique?

a) Statement Testing b) Decision Testing
c) Condition Coverage d) All of the mentioned

310. Alpha testing is done at

a) Developer's end b) User's end
c) Developer's & User's end d) None of the mentioned

311. Boundary value analysis belongs to?

a) White Box Testing b) Black Box Testing
c) White Box & Black Box Testing d) None of the mentioned

ANSWER SHEET

1	2	3	4	5	6	7	8	9	10
c	a	c	b	a	b	d	c	d	c
11	12	13	14	15	16	17	18	19	20
a	c	c	d	a	a	a	c	d	b
21	22	23	24	25	26	27	28	29	30
d	b	a	b	d	a	a	a	a	a
31	32	33	34	35	36	37	38	39	40
b	a	b	c	d	b	c	d	b	d
41	42	43	44	45	46	47	48	49	50
a	b	b	c	d	c	c	c	d	a
51	52	53	54	55	56	57	58	59	60
b	c	b	d	c	b	a	c	d	b
61	62	63	64	65	66	67	68	69	70
a	a	a	d	a	c	b	d	c	b
71	72	73	74	75	76	77	78	79	80
a	d	c	d	b	d	c	b	c	b
81	82	83	84	85	86	87	88	89	90
b	d	d	d	b	a	a	a	a	c

91	92	93	94	95	96	97	98	99	100
c	a	d	d	d	a	d	a	a	c
101	102	103	104	105	106	107	108	109	110
b	b	c	c	c	d	b	c	c	b
111	112	113	114	115	116	117	118	119	120
d	d	d	b	a	d	d	b	d	b
121	122	123	124	125	126	127	128	129	130
a	d	b	a	b	a	a	d	a	a
131	132	133	134	135	136	137	138	139	140
c	a	a	c	d	a	c	b	b	b
141	142	143	144	145	146	147	148	149	150
c	b	d	a	a	b	b	d	d	d
151	152	153	154	155	156	157	158	159	160
a	c	c	d	c	d	b	a	a	d
161	162	163	164	165	166	167	168	169	170
b	a	b	c	a	c	c	a	c	d
171	172	173	174	175	176	177	178	179	180
b	d	b	d	d	d	b	d	a	c
181	182	183	184	185	186	187	188	189	190
d	b	a	a	c	c	b	a	b	c
191	192	193	194	195	196	197	198	199	200
c	a	d	a	d	a	d	b	c	b
201	202	203	204	205	206	207	208	209	210
d	d	c	d	b	b	a	a	c	c
211	212	213	214	215	216	217	218	219	220
b	b	b	b	c	d	c	d	c	b
221	222	223	224	225	226	227	228	229	230
d	b	c	c	a	c	b	c	d	a
231	232	233	234	235	236	237	238	239	240
b	c	a	c	c	a	b	a	d	b
241	242	243	244	245	246	247	248	249	250
b	a	c	b	d	a	b	b	c	b
251	252	253	254	255	256	257	258	259	260
c	d	b	c	b	c	b	d	d	d
261	262	263	264	265	266	267	268	269	270
c	c	c	b	c	c	b	c	a	b

271	272	273	274	275	276	277	278	279	280
a	b	c	c	b	d	b	c	c	b
281	282	283	284	285	286	287	288	289	290
a	d	d	a	a	c	c	b	d	c
291	292	293	294	295	296	297	298	299	300
a	b	c	a	b	a	c	c	b	c
301	302	303	304	305	306	307	308	309	310
d	b	c	d	c	b	d	b	d	a
311									
b									

Explanation of all

1. ***Explanation:*** American Standard Code for Information Interchange .ASCII stands for American Standard Code for Information Interchange. It is a method to define a set of characters for encoding text documents on computers. The ASCII codes represent computers and other communication devices that use text
2. ***Explanation:*** The difference between a PROM and a ROM (read-only memory) is that a PROM is manufactured as blank memory, whereas a ROM is programmed during the manufacturing process. To write data onto a PROM chip, you need a special device called a PROM programmer or PROM burner.
3. ***Explanation:*** The main limitation was Random Data Access. In digital data storage systems which are operated by microcontrollers or processors needs address of the location to access the data desired. Magnetic tapes of larger memory capacity, that random access is time consuming due to motor speed limitations used in the recorders and players.
4. ***Explanation:*** The basic difference between analog and digital computers is the type of data they process. ... Digital computer process data which is binary, i.e. in the form of 0 and 1. Analog computers operate on mathematical variables in the form of physical quantities that are continuously varying.
5. ***Explanation:*** The Electronic Delay Storage Automatic Calculator (EDSAC), developed at Britain's Cambridge University, ran its first programs in 1949. It became the first stored-program computer in regular use, heralding the transition from test to tool.
6. ***Explanation:*** The computers of first generation used vacuum tubes as the basic components for **memory** and circuitry for CPU (Central Processing Unit).
7. Computer

8. ***Explanation:*** Registers, which are partially visible to users and used to hold conditional, are known as General purpose register. General Purpose Registers, For example, when a program is interrupted its state, ie: the value of the registers such as the program counter, instruction register or memory address register - may be saved into the general purpose registers, ready for recall when the program is ready to start again.

9. ***Explanation:*** **Glitch** means a malfunction. **Glitch** is sometimes used as a synonym for **bug**, but more often it refers to a hardware problem

10. microprocessors does not contain I/O devices

11. ***Explanation:*** The **PDP-1** (*Programmed Data Processor-1*) is the first computer in Digital Equipment Corporation's PDP series and was first produced in 1959. It is famous for being the computer most important in the creation of hacker culture at MIT

12. ***Explanation:*** **FORTRAN**, derived from *Formula Translation*

13. ***Explanation:*** Modern Computers are very reliable but they are not Infallible.
A computer is a device that can be instructed to carry out sequences of arithmetic or logical operations automatically via computer programming. Modern computers have the ability to follow generalized sets of operations, called programs. These programs enable computers to perform an extremely wide range of tasks.

14. All of them.

15. ***Explanation:*** **UNIVAC** (**Universal Automatic Computer**) is a line of electronic digital stored-program computers starting with the products of the Eckert–Mauchly Computer Corporation. Later the name was applied to a division of the Remington Rand company and successor organizations.

16. ***Explanation:*** **EEPROM** stands for **electrically erasable programmable read-only memory** and is a type of non-volatile memory used in computers, integrated in microcontrollers for smart cards and remote keyless systems, and other electronic devices to store relatively small amounts of data but allowing individual bytes to be erased and reprogrammed.

17. J.H. Van Tassel

18. ***Explanation:*** MIPS Stands for "Million Instructions Per Second." It is a method of measuring the raw speed of a computer's processor

19. ***Explanation:*** Short for **Compact Disc Read-Only Memory**, a **CD-ROM** is an optical disc that contains audio or software data whose memory is read-only. A **CD-ROM Drive** or **optical drive** is the device used to read them.

20. ***Explanation:*** The period of second generation was from 1959-1965. In this generation, transistors were used that were cheaper, consumed less power, more compact in size, more reliable and faster than the **first generation** machines made of vacuum tubes.

21. ***Explanation:*** Extended binary coded decimal interchange **code** (**EBCDIC**) is an 8-bit binary **code** for numeric and alphanumeric characters. It was developed and used by

IBM. It is a coding representation in which symbols, letters and numbers are presented in binary language.

22. ***Explanation:*** Booting is a startup sequence that starts the operating system of a computer when it is turned on. A boot sequence is the initial set of operations that the computer performs when it is switched on. Every computer has a boot sequence. The average computer doesn't understand the boot sequence but is important to know for customizing and troubleshooting your computer.

23. Airthmatic Logic Unit

24. ***Explanation:*** The **motherboard** is a printed circuit board and foundation of a computer that is the biggest board in a computer chassis. It allocates power and allows communication to and between the CPU, RAM, and all other computer hardware components.

25. All of them.

26. Marcian E Huff

27. ***Explanation:*** Short for **Video Graphics Adapter** or **Video Graphics Array**, **VGA** is a popular display standard developed by IBMand introduced in 1987. VGA provides 640 x 480 resolution color display screens with a refresh rate of 60 Hz and 16 colors displayed at a time. If the resolution is lowered to 320 x 200, 256 colors are shown

28. ***Explanation:*** Digital paper is the latest write-once optical storage media.Digital paper, also known as interactive paper, is patterned paper used in conjunction with a digital pen to create handwritten digital documents. The digital pen uses this pattern to store the handwriting and upload it to a computer.

29. ***Explanation:*** One computer that is not considered a portable is Minicomputer. In the sense that they can be moved relatively easily, yes, but most times when people are thinking of portable computers they're thinking of a machine that can run on battery power with its own monitor in tow. A mini oc has neither of those crucial features.

30. ***Explanation:*** Optical character recognition or optical character reader is the electronic or mechanical conversion of images of typed, handwritten or printed text into machine-encoded text, whether from a scanned document, a photo of a document, a scene-photo or from subtitle text superimposed on an image.

31. ***Explanation:*** Dedicated computer is Which is assigned one and only one task. A dedicated server is a single computer in a network reserved for serving the needs of the network. For example, some networks require that one computer be set aside to manage communications between all the other computers. A dedicated server could also be a computer that manages printer resources.

32. ***Explanation:*** The accuracy of the floating-point numbers representable in two 16-bit words of a computer is approximately 16 digits. Floating Point Numbers. Scientific Notation: has a single digit to the left of the decimal point. Computer arithmetic that

supports such numbers is called Floating Point. A Single-Precision floating-point number occupies 32-bits, so there is a compromise between the size of the mantissa and the size of the exponent.

33. Dot per square inch.

34. Byte.

35. ***Explanation:*** A **dumb terminal** is simply an output device that accepts data from the CPU. In contrast, a smart **terminal** is a monitor that has its own processor for special features, such as bold and blinking characters.

36. input is never converted to digital form.

37. ***Explanation:*** A Compiler is a computer program that translates code written in a high level language to a lower level language, object/machine code.

38. ***Explanation:*** Before a disk drive can access any sector record, a computer program has to provide the record's disk address. Track number, Sector number and Surface number information does this address specify.A disk drive track is a circular path on the surface of a disk or diskette on which information is magnetically recorded and from which recorded information is read. A track is a physical division of data in a disk drive, as used in the Cylinder-Head-Record (CCHHR) addressing mode of a CKD disk.Each sector stores a fixed amount of user-accessible data, traditionally 512 bytes for hard disk drives (HDDs) and 2048 bytes for CD-ROMs and DVD-ROMs. Newer HDDs use 4096-byte (4 KiB) sectors, which are known as the Advanced Format (AF). The sector is the minimum storage unit of a hard drive.In computer disk storage, a sector is a subdivision of a track on a magnetic disk or optical disc. Each sector stores a fixed amount of user-accessible data, traditionally 512 bytes for hard disk drives (HDDs) and 2048 bytes for CD-ROMs and DVD-ROMs. Newer HDDs use 4096-byte (4 KiB) sectors, which are known as the Advanced Format (AF). The sector is the minimum storage unit of a hard drive.

39. ***Explanation:*** Plotter accuracy is measured in terms of repeatability and resolution. Resolution the smallest increment the system can display or measure. A system can have a high resolution with poor repeatability and accuracy. Resolution is a primary concern in applications regarding speed control or surface finish.

40. ***Explanation:*** An **integrated circuit** or monolithic **integrated circuit** (also referred to as an **IC**, a chip, or a microchip) is a set of electronic **circuits** on one small flat piece (or "chip") of semiconductor material that is normally silicon. ICs have two main advantages over discrete **circuits**: cost and performance.

41. Interpreter.

42. Control Section.

43. extremely high reliability

44. J. Presper Eckert and John W Mauchly

45. All of them

46. LASER
47. Data
48. it is a peripheral device
49. online real time systems first become popular
50. Extended Binary Coded Decimal Interchange Code
51. dynamic RAM
52. ROM and RAM
53. assembly language
54. fabricated on a tiny silicon chip
55. both a and b
56. extremely high reliability
57. capacitance keyboard
58. ENIAC
59. All of them
60. Two stable state
61. high level language
62. 1 KB = 1024 bytes
63. a device which is not connected to CPU
64. all of them
65. lower efficiency
66. instruction register
67. bug
68. Temporary
69. mass storage
70. The following are the phases through which our program passes before being transformed into an executable form: Processor, Compiler, assembler,Linke.
71. System programming language
72. both (b) and (c)
73. () allowed in a C Arithmetic instruction
74. B & C Both
75. The body of a do … while loop is executed at least once.
76. The ans is D
77. prints ASCII equivalent of 100
78. Standard ANSI C recognizes 32 number of keywords
79. Both of the above
80. 1examveda
81. Real

82. The prefix 0 in an integer value indicates octal value. In octal value use of 8 and 9 is not allowed and hence the error.

83. A declaration occurs once, but a definition may occur many times.

84. Hierarchy is * / + –

85. An array is a collection of variables that are of the same data type.

86. int num[6] = { 2, 4, 12, 5, 45, 5 } ;

87. Sequential Memory Location

88. printf("%d%d", book.price, book.page);

89. The ans is a

90. infinite number of times

91. 032

92. Error

93. ints and chars

94. A & B Both

95. All the above

96. Call by Value

97. Realloc

98. 9

99. 11

100. ***Explanation:*** If the index of the array size is exceeded, the program will crash. Hence "option c" is the correct answer. But the modern compilers will take care of this kind of errors.

101. 10

102. Main

103. Declaration of Function

104. ***Explanation:*** *strcmp(const char *s1, const char*s2);*
The *strcmp* return an *int* value that is
if s1 < s2 returns a value < 0
if s1 == s2 returns 0
if s1 > s2 returns a value > 0

105. ***Explanation:*** *gets();* collects a string of characters terminated by a new line from the standard input stream *stdin*

106. ***Explanation:*** + Open an existing file for update (reading and writing).

107. ***Explanation:*** Because, In fgets() we can specify the size of the buffer into which the string supplied will be stored.

108. *malloc()* and *calloc()*

109. Time and memory

110. By counting the number of primitive operations performed by the algorithm on a given input size

111. Null case

112. Big (⋈)

113. One can use any of the notations to represent the worst-case scenario.

114. ***Explanation:*** If you notice, j keeps doubling till it is less than or equal to n. Number of times, we can double a number till it is less than n would be log(n).

Let's take the examples here.

for n = 16, j = 2, 4, 8, 16

for n = 32, j = 2, 4, 8, 16, 32

So, j would run for O(log n) steps.

i runs for n/2 steps.

So, total steps = O(n/ 2 * log (n)) = **O(n*logn)**

115. O(n)

116. ***Explanation:*** The Worst case occur in linear search algorithm when Item is the last element in the array or is not there at all.

117. ***Explanation:*** Big O notation describes limiting behaviour, and also gives upper bound on growth rate of a function.

118. ***Explanation:*** The growth rate of that function will be linear.

119. ***Explanation:*** It is $O(\log_2 n)$, therefore complexity will be logarithmic

120. ***Explanation:***ArrayIndexOutOfBoundsException is a run-time exception and the compilation is error-free.

121. Arrays

122. ***Explanation:***Arrays stores elements of same data type and present in continuous memory locations.

123. ***Explanation:***Arrays are of fixed size. If we insert elements less than the allocated size, unoccupied positions can't be used again. Wastage will occur in memory.

124. Randomly

125. ***Explanation:*** Push operation allows users to insert elements in stack. If stack is filled completely and trying to perform push operation stack – overflow can happen.

126. ***Explanation:*** Underflow occurs when the user performs a pop operation on an empty stack. Overflow occurs when the stack is full and the user performs a push operation. Garbage Collection is used to recover the memory occupied by objects that are no longer used.

127. ***Explanation:*** The stack is filled with 5 elements and pushing one more element causes a stack overflow. This results in overwriting memory, code and loss of unsaved work on the computer.

128. ***Explanation:*** Postfix Expression is (6+(3-(2*4))) which results -18 as output.

129. The ans is a

130. ***Explanation:*** Linear list of elements in which deletion is done at front side and insertion at rear side is called Queue. In stack we will delete the last entered element first.

131. ***Explanation:*** In Breadth First Search Traversal, BFS, starting vertex is first taken and adjacent vertices which are unvisited are also taken. Again, the first vertex which was added as an unvisited adjacent vertex list will be considered to add further unvisited vertices of the graph. To get first unvisited vertex we need to follows First In First Out principle. Queue uses FIFO principle.

132. The another name of the circular queue is Ring buffer.

133. ***Explanation:*** Queue follows FIFO approach. i.e. First in First Out Approach. So, the order of removal elements are ABCD.

134. ***Explanation:*** We can easily concatenate two lists in O (1) time using singly or doubly linked list, provided that we have a pointer to the last node at least one of the lists. But in case of circular doubly linked lists, we will break the link in both the lists and hook them together. Thus circular doubly linked list concatenates two lists in O (1) time.

135. Binary search

136. ***Explanation:*** As memory is allocated at the run time.

137. ***Explanation:*** The 'next' pointer points to null only when the list is empty, otherwise it points to the head of the list. Every node in circular linked list can be a starting point(head).

138. Tree

139. ***Explanation:*** * and / have higher priority. Hence, they are evaluated first. Then, + is evaluated. Hence, 2+2=4.

140. Two

141. ***Explanation:*** The table is in 3NF if every non-prime attribute of R is non-transitively dependent (i.e. directly dependent) on every superkey of R.

142. right to left

143. ***Explanation:*** Depth-first search is an algorithm for traversing or searching tree or graph data structures. The algorithm starts at the root node and explores as far as possible along each branch before backtracking.

144. Conceptual view

145. A number of tuples.
146. Non- Procedural language.
147. a Binary operator.
148. Null case
149. Big (⋈)
150. Open Database Connectivity.
151. is the entire database.
152. Three levels
153. Tables
154. None
155. Data Defination Language(DDL)
156. view level
157. weak entity set.
158. not Null
159. users
160. all of the above
161. The data manipulation language (DML).
162. Values
163. Data elements in the database can be modified by changing the data dictionary.
164. Doubly outlined rectangle
165. Network Model
166. Procedural Query Language
167. Foreign Key
168. Cartesian product
169. Attributes
170. None of these
171. Multiple users wish to access the data.
172. All of the above
173. SELECT NAME FROM EMPLOYEE;
174. All of the above
175. Domain
176. All of the above.
177. A is not a candidate key
178. Combination of projection and Cartesian product
179. BETWEEN
180. Join

181. Triangle

182. Self Join

183. Raw

184. **Atomicity:**atomicity means that you either commit to the entirety of the transaction occurring or having no transaction at all.

Consistency: Consistency refers to maintaining data integrity constraints.

Isolation: Isolated transactions are considered to be "serializable", meaning each transaction happens in a distinct order without any transactions occurring in tandem.

Durability: Durability ensures that changes made to the database (transactions) that are successfully committed will survive permanently, even in the case of system failures.

185. ***Explanation:*** INNER JOIN: Returns all rows when there is at least one match in BOTH tables.

186. ***Explanation:*** An outer join does not require each record in the two joined tables to have a matching record..

187. Select * from R cross join S

188. ***Explanation:*** Transaction is a set of operation until commit.

189. ***Explanation:*** Commit work commits the current transaction.

190. ***Explanation:*** Once a transaction has executed commit work, its effects can no longer be undone by rollback work.

191. ***Explanation:*** Normalisation is the process of removing redundancy and unwanted data.

192. ***Explanation:*** The first normal form is used to eliminate the duplicate information.

193. ***Explanation:*** The relation in second normal form is also in first normal form and no partial dependencies on any column in primary key.

194. ***Explanation:*** Key is the basic element needed for the constraints.

195. ***Explanation:*** Diamond represents a relationship set and rectangle represents a entity set.

196. MySQL

197. Alan Kay

198. Class

199. An Abstract Method

200. Access Modifiers

226. ***Explanation:***

Y=A+B. This is the equation of OR gate. We require 3 NAND gates to create OR gate. We can also write

After 1st NAND operation

Y = (A AND B)'

Y= A' + B' (Demorgan's Law)

After 2nd NAND operation

Y= (A' + B')'

Y= A . B (Demorgan's Law)

After 3rd NAND operation

Y= (A . B)'

Y= A' + B ' (Demorgan's Law)

So we need 3 NAND gates.

227. The one half-adder can add the least significant bit of the two numbers. Full adders are required to add the remaining 15 bits as they all involve adding carries.

229. Answer is C as

if X= 0 then X NAND 1 = 1 = X '

if X=1 then X NAND 1= 0= X'

In Option (d)

if X= 0 then X NOR 0 = 1 = X'

if X=1 then X NOR 1= 0 <> X'

232. In the demultiplexer, inputs are inserted serially and then it gives multiple outputs which are in parallel form.

234. The equation for digital multiplexer includes AND and OR operations . For example AB+CD. So here firstly we have to solve AND operation then OR operation. Option is 'C'.

247. For Memory Access

Cycle time=Latency time+Transfer Time

Latency time is overhead of finding the right memory location and preparing to access it

Transfer Time = Time required to transfer the data.

Hence cycle time is longer than access time .

248. Dynamic memory uses capacitor for storing information, so it doesnt need constant power but it has higher bit density due to its configuration .

282. Deadlock doesn't occurs with a single resource

283. **Safe State**

- ✓ A system is in a safe state only if there exists a safe sequence of processes P1, P2, P3, Pn where:
- ✓ For each Pi, the resources that Pi can still request can be satisfied by the currently available resources plus the resources help by all Pj, j<i.
- ✓ If a system is in safe state, there is no deadlock.
- ✓ If the system is deadlocked, it is in an unsafe state.

- ✓ If a system is in unsafe state, there is a possibility for a deadlock.
- ✓ Avoidance: making sure the system will not enter an unsafe state.

284. Using Banker's algorithm, one can show that one process has to acquire all its needed resources. This process, after completing its task, will release all its resources, thereby avoiding any possible deadlock.

285. At Least one process will be holding 2 resources in case of a simultaneous demand from all the processes. That process will release the 2 resources, thereby avoiding any possible deadlock.

311. Boundary value analysis is based on testing at the boundaries between partitions and checks the output with expected output.