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

   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. **QUESTION: The memory which is programmed at the time it is manufactured**

   a) POM b) RAM c) PROM d) EPROM **ANS.:** POM

   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. **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

   ANS.: magnetic tape

   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. **QUESTION: A digital computer did not score over, an analog computer in terms of**

   a) speed b) accuracy c) reliability d) cost **ANS.:** accuracy

   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. **QUESTION: Which of the following is the first generation of computer?**

   a) EDSAC b) IBM-1401 c) CDC-1604 d) ICL-2900 **ANS.:** EDSAC

   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. **QUESTION: Chief component of first generation computer was**

   a) transistors b) vacuum tubes and valves

   c) integrated circuits d) none of them **ANS.:** vacuum tubes and valves

Explanation: The computers of first generation used vacuum tubes as the basic components for **memory** and circuitry for CPU (Central Processing Unit).

7. **QUESTION: Human beings are referred to as Homosapinens, which device is called Silicon Sapiens?**

   a) monitor b) hardware c) robot d) computer **Ans.:** 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 **ANS.:** general purpose register

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. **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 **ANS.:** glitch

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

16. **QUESTION: FoxPro is**

   a) a medicine b) a disease c) a computer language D. an animal

   ANS.: a computer language

Explanation: **FoxPro** is a Microsoft data-centric procedural programming **language** that subsequently became object-oriented.

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

    ANS.: microprocessors does not contain I/O devices

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

    ANS.: PDP-I, 1958

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. QUESTION: FORTRAN is

a) File Translation b) Format Translation
c) Formula Translation d) Floppy Translation

ANS.: Formula Translation

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

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

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

ANS.: infallible

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

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

ANS.: all of them

15. QUESTION: UNIVAC is

a) Universal Automatic Computer b) Universal Array Computer
c) Unique Automatic Computer d) Unvalued Automatic Computer

ANS.: Universal Automatic Computer

Explanation: v**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. 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 **ANS.:** Electrically Erasable Programmable Read Only Memory

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. **QUESTION: Super Computer was invented by**

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

ANS.: J.H. Van Tassel

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

a) EFTS b) MPG c) MIPS d) CFPS **ANS.:** MIPS

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

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 **ANS.:** Compact Disk Read Only Memory

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. **QUESTION: Second Generations computers were developed during**

a) 1949 to 1955 b) 1956 to 1965

c) 1965 to 1970 d) 1970 to 1990 **ANS.:** 1956 to 1965

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. **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 **ANS.:** EBCDIC Code

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. **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 **ANS.:** booting

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. QUESTION: ALU is

a) Arithmetic Logic Unit b) Array Logic Unit
c) Application Logic Unit d) none of them **ANS.:** Arithmetic Logic Unit

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 **ANS.:** motherboard

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. QUESTION: The special files of DOS are

a) COM b) EXE
c) BATCH d) all of them **ANS.:** all of them

26. QUESTION: Who invented the microprocessor?

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

27. QUESTION: VGA is

a) Video Graphics Array
b) Visual Graphics Array
c) Volatile Graphics Array
d) Video Graphics Adapter **ANS.:** Video Graphics Array

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

a) digital paper b) magneto-optical disk
c) WORM disk d) CD-ROM disk **ANS.:** digital paper

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. 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 **ANS.:** minicomputer

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

a) OCR b) OMR c) MICR d) all of them **ANS.:** OCR

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. 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

ANS.: which is assigned one and only task

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. 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 **ANS.:** 16 digits

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.

57. QUESTION: MSI stands for

a) Medium Scale Integrated Circuits

b) Medium System Integrated Circuits

c) Medium Scale Intelligent Circuit

d) Medium System Intelligent Circuit **ANS.:** Medium Scale Integrated Circuits

Explanation: Medium-scale integration is the process of embedding hundreds of transistors in one integrated circuit or microchip.

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 **ANS.:** dot per s. inch

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

a) complier b) bus c) byte d) clone **ANS.:** byte

35. QUESTION: A dumb terminal has

a) an embedded microcomputer

b) extensive memory

c) independent processing

d) a keyboard and screen **ANS.:** a keyboard and screen

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. 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 **ANS.:** input is never converted to digital form

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 **ANS.:** compiler

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. 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 **ANS.:** all of them

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

a) buffer size
b) resolution
c) vertical dimensions
d) intelligence

ANS.: resolution

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. 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

ANS.: fabricated on a tiny silicon chip

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. 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

ANS.: interpreter

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

ANS.: control section

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

ANS.: extremely high reliability

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

ANS.: J. Presper Eckert and John W Mauchly

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

a) read-out b) read from

c) read d) all of them **ANS.:** all of them

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

a) basic b) FORTRAN

c) LASER d) PASCAL **ANS.:** LASER

47. QUESTION: All modern computer operate on

a) information b) floppies c) data d) word **ANS.:** data

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 **ANS.:** it is a peripheral device

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

ANS.: 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

ANS.: Extended Binary Coded 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 **ANS.:** dynamic RAM

52. QUESTION: Two kinds of main memory are

a) primary and secondary b) random and sequential

c) ROM and RAM d) all of them **ANS.:** ROM and RAM

53. QUESTION: Easily relocatable language is

a) machine language

b) assembly language

c) high level language

d) medium level language **ANS.:** assembly 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 **ANS.:** 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 **ANS.:** both a and b

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 **ANS.:** extremely high reliability

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 **ANS.:**capacitance keyboard

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

a) UNIVAC b) EDVAC
c) ENIAC d) all of them **ANS.:** ENIAC

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 **ANS.:** 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 **ANS.:** two stable state

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

a) high level language b) low level language
c) assembly language d) machine language **ANS.:** high level language

137. QUESTION: A storage area used to store data to compensate for the difference in speed at which the different units can handle data is

a) memory b) buffer c) accumulator d) address **ANS.:** buffer

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 **ANS.:** 1 KB = 1024 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 **ANS.:**a device which is not connected to CPU

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 **ANS.:** 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 **ANS.:** lower efficiency

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 **ANS.:** instruction register

67. QUESTION: An error in computer data is called

a) chip b) bug c) CPU d) storage **ANS.:** bug

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 **ANS.:** 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 **Ans.:**mass 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 **Ans.:**B

Explanation: The following are the phases through which our program passes before being transformed into an executable form:

- Preprocessor
- Compiler
- Assembler
- Linke

71. C was primarily developed as

a) System programming language b) General purpose language

c) Data processing language d) None of the above. **Ans.:** Option A

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) **Ans.:** D

73. Which of the following is allowed in a C Arithmetic instruction

a) [] b) {}

c) () d) None of the above **Ans.:** C

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 **Ans.:** D

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. **Ans.:** B

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

a) 10 b) 0 c) 12 d) 1 **Ans.:** D

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 **Ans.:** C

78. Standard ANSI C recognizes _____ number of keywords?

a) 30 b) 32 c) 24

d) 36 E. 40 **Ans.:** Option B

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 **Ans.:** Option C

80. Which one of the following is not a valid identifier?

a) _examveda b) 1examveda

c) exam_veda d) examveda1 **Ans.:** Option B

81. Which of the following is not a correct variable type?

a) float b) real c) int

d) double E. char **Ans.:** Option B

82. Find the output of the following program. void main() { int i=01289; printf("%d", i); }

a) 0289 b) 1289 c) 713

d) 0713 e) Syntax error **Ans.:** Option E

Solution(By Examveda Team)

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. 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.

E. There is no difference between them.

Ans.: Option D

84. Which of the following shows the correct hierarchy of arithmetic operations in C

a) / + * – b) * – / + c) + – / * d) * / + – **Ans.:** 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. **Ans.:** B

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 } ; **Ans.:** A

87. An array elements are always stored in _____ memory locations.

a) Sequential b) Random

c) Sequential and Random d) None of the above **Ans.:** A

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); **Ans.:** A

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 **Ans.:** a

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 **Ans.:** c

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 **Ans.:** c

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 **Ans.:** a

93. Bitwise operators can operate upon?

a) double and chars b) floats and doubles
c) ints and floats d) ints and chars **Ans.:** D

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 **Ans.:** D

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 **Ans.:** D

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 **Ans.:** A

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

a) calloc b) free c) malloc d) realloc **Ans.:** D

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 **Ans.:** a

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 **Ans.:** a

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.

Ans.: Option C

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.

Example: Run the below program, it will crash in Windows (TurboC Compiler)

In C, if you pass an array as an argument to a function, what actually gets passed?

a) Value of elements in array
b) First element of the array
c) Base address of the array
d) Address of the last element of array **Ans.:** Option C

Explanation: The statement 'C' is correct. When we pass an array as a function argument, the base address of the array will be passed.

```
void main()
{
int a=10,b=20;
char x=1,y=0;
```

```
if(a,b,x,y)
{
printf("EXAM");
}
}
```

100. What is the output?

a) XAM is printed b) exam is printed
c) Compiler Error d) Nothing is printed

Ans.: d

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

101. What is the output of this program?

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

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

a) auto b) main c) case d) register **Ans.:** B

103. Prototype of a function means _____

a) Name of Function b) Output of Function
c) Declaration of Function d) Input of a Function
Ans.: c

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

a) -1 b) 1 c) 0 d) Yes **Ans.:** Option C

Explanation: **Declaration**: *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. Which of the following function is more appropriate for reading in a multi-word string?

a) printf() b) scanf() c) gets() d) puts() **Ans.:** Option C

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

A pointer is

a) A keyword used to create variables

b) A variable that stores address of an instruction

c) A variable that stores address of other variable

d) All of the above

Ans.: Option C

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

Ans.: Option D

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

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

a) gets() b) fgets() c) == d) == **Ans.:** Option B

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

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()* **Ans.:** Option C

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 **Ans.:** c

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 **Ans.:** B

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 (⋈) **Ans.:** D

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

a)Big (O) b)Big (Ω) c)Big (θ) d)All of the above **Ans.:** d

Explanation:

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

What is the Big O time complexity of the following?

for(var i=0;i<n;i++)

for(var j=0;j<m;j++)

a)O(n) b)O(m) c)O(nm) d)O(n+m) **Ans.:** c

Algorithm A and B have a worst-case running time of O(n)O(n)O(n) and O(logn)O(log n)O(logn), respectively. Therefore, algorithm B always runs faster than the algorithm A.

a)True

b)*False*

Explanation:

First, this is a worst-case characterization. In the best case, algorithm A might run faster than B. Secondly, due to the leading multiplicative constants that are omitted in the asymptotic analysis might mean that algorithm A runs faster than B for small input sizes

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) **Ans.:** b

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. The complexity of linear search algorithm is _____

a) O(n) b) O(log n) c) $O(n^2)$ d) O(n log n) **Ans.:** a

Explanation: The worst case complexity of linear search is O(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 **Ans.:** d

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. 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
Ans.: d

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

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 **Ans.:** b

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

If for an algorithm time complexity is given by $O((3/2)^n)$ then complexity will be

a) constant b) quardratic
c) exponential d) none of the mentioned **Ans.:** c

Explanation: The growth rate of that function will be exponential therefore complexity will be exponential.

119. The time complexity of binary search is given by _____

a) constant b) quardratic
c) exponential d) none of the mentioned **Ans.:** d

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

The space factor when determining the efficiency of algorithm is measured by

a)Counting the maximum memory needed by the algorithm
b) Counting the minimum memory needed by the algorithm
c)Counting the average memory needed by the algorithm
d)Counting the maximum disk space needed by the algorithm **Ans.:** a

120. When does the ArrayIndexOutOfBoundsException occur?

a) Compile-time b) Run-time
c) Not an error d) Not an exception at all **Ans.:** b

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

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 **Ans.:** a

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 **Ans.:** d

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

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 **Ans.:** b

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. Elements in an array are accessed _____

a) randomly b) sequentially c) exponentially d) logarithmically **Ans.:** a

Explanation: Elements in an array are accessed randomly. In Linked lists, elements are accessed sequentially.

Which of the following data structures is linear type?

a) Stack b) Graph c) Trees d) Binary tree **Ans.:** a

Examples of linear data structures are List, Queue, Stack, Array etc.
Examples of non linear data structure are Graph, Map, Tree.

125. Process of inserting an element in stack is called _____

a) Create b) Push c) Evaluation d) Pop **Ans.:** b

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. 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 **Ans.:** a

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. 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 **Ans.:** a

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

a) 1 b) 40 c) 74 d) -18 **Ans.:** d

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

The data structure required to check whether an expression contains balanced parenthesis is?

a) Stack b) Queue c) Array d) Tree **Ans.:** a

Stack check the balances parenthesis which is correct or not

Consider the following operation performed on a stack of size 5.

Push(1);
Pop();
Push(2);
Push(3);
Pop();
Push(4);
Pop();
Pop();
Push(5);

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

a) 1 b) 2 c) 3 d) 4 **Ans.:** a

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 **Ans.:** a

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

a) Stack b) Array c) Queue d) Tree **Ans.:** c

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. Circular Queue is also known as _____

a) Ring Buffer b) Square Buffer c) Rectangle Buffer d) Curve Buffer **Ans.:** a
The another name of the circular queue is Ring 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 **Ans.:** a

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

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 **Ans.:** c

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

a) Insertion sort b) Radix sort
c) Polynomial manipulation d) Binary search **Ans.:** d

Explanation: It cannot be implemented using linked lists.

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

a) Dynamic b) Static c) Compile time d) Heap **Ans.:** a

Explanation: As memory is allocated at the run time.

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 **Ans.:** c

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

a) Graph b) Tree c) Dequeue d) Priority **Ans.:** b

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 **Ans.:** b

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

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

a) one b) two c) three d) four **Ans.:** b

141. Explanation: 2 stacks are required for evaluation of prefix expression, one for integers and one for characters.

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**Ans.:** b

143. Explanation: The string is read from right to left because a prefix string has operands to its right side.

144. 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 **Ans.:** d

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.

145. The view of total database content is

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

146. The conceptual schema describes the Database structure of the whole database for the community of users.

147. 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. **Ans.:** a

148. Relational calculus is a

a)Procedural language. b) Non- Procedural language.

c) Data definition language. d) High-level language. **Ans.:** b

149. Cartesian product in relational algebra is

a) a Unary operator. b)a Binary operator.

c) a Ternary operator. d)not defined. **Ans.:** b

150. ODBC stands for

a) Object Database Connectivity. b) Oral Database Connectivity.

c) Oracle Database Connectivity. d) Open Database Connectivity. **Ans.:** d

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 © **Ans.:** a

152. Architecture of the database can be viewed as

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

153. In a relational model, relations are termed as

a) Tuples. b) Attributes c) Tables. d) Rows. **Ans.:** c

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 **Ans.:** d

155. The database schema is written in

a) HLL b) (B) DML c) DDL d) DCL **Ans.:** c

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

a) physical level. b) logical level. c) conceptual level d) view level **Ans.:** d

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 **Ans.:** b

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

a) not Null b) Null c) both Null d) any value **Ans.:** a

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

a) users. b) separate files.

c) database. d) database administrator. **Ans.:** a

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. **Ans.:** d

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. **Ans.:** b

162. Count function in SQL returns the number of

a) values. b) distinct values. c) groups. d) columns. **Ans.:** a

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. **Ans.:** b

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 **Ans.:** c

165. SET concept is used in:
a) Network Model b) Hierarchical Model
c) Relational Model d) None of these **Ans.:** a

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

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

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

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

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 **Ans.:** d

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. **Ans.:** b

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

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 **Ans.:** b

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

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

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. **Ans.:** d

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 © **Ans.:** b

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 **Ans.:** d

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 **Ans.:** a

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

a) SELECT b) PROJECT c) JOIN d) PRODUCT **Ans.:** c

181. In E-R diagram generalisation is represented by

a) Ellipse b) Dashed ellipse c) Rectangle d) Triangle **Ans.:** d

182. A table joined with itself is called

a) Join b) Self Join c) Outer Join d) Equal Join **Ans.:** b

183. __ data type can store unstructured data

a) RAW b) CHAR c) NUMERIC d) VARCHAR **Ans.:** a

184. Abbreviate ACID?

a) Atomicity, Consistency, Isolation, Durability

b) Atomicity, Concurrency, Isolation, Duplicity

c) Aggregation, Consistency, Isolation, Durability

d) Atomicity, Consistency, Identity, Durability **Ans.:** a

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. 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 **Ans.:** c

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

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**Ans.:** c

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

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 **Ans.:** b

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

a) Transaction b) Commit c) Rollback d) Flashback **Ans.:** a

Explanation: Transaction is a set of operation until commit.

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

a) View b) Commit c) Rollback d) Flashback **Ans.:** b

Explanation: Commit work commits the current transaction.

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 **Ans.:** c

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

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 **Ans.:** c

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

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

a) First b) Second c) Third d) Fourth **Ans.:** a

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

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 **Ans.:** d

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

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

Which forms are based on the concept of functional dependency:

a) 1NF b) 2NF c) 3NF d) 4NF **Ans.:** c

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.

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 **Ans.:** d

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

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

a) MySQL b) Microsoft SQL Server

c) Microsoft Access d) Oracle **Ans.:** a

197. OOPs is invented by _____

a)Andrea Ferro b)Dennis Ritchie c)Adele Goldberg d)Alan Kay **Ans.:** d

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

a) b)A Class c)Inheritance d)None of Above **Ans.:** b

199. Which of following does not have a body

a)An Interface b)A Class

c)An Abstract Method d)none of above **Ans.:** c

200. In oops public, private & protected are

a)Classes b)Access Modifiers

c)Interfaces d)Method signature **Ans.:** b

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 **Ans.:** d

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

a)Double b) String c)Int d) Class **Ans.:** d

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 **Ans.:** c

204. Wecan not create instance of

a)Anonymous class b)Nested class

c) Parent class d)Abstract class **Ans.:**d

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 **Ans.:** b

206. Which Feature of OOP encourages the code reusability?

a)Polymorphism b) Inheritance c) Abstraction d) Encapsulation **Ans.:** b

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

a)C language b)Java c)Kotlin d)C++ **Ans.:** a

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

a)Static function b) Friend function c) Const function d)Virtual function **Ans.:** a

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

a)Object b) Errors c) Exceptions d)Maths **Ans.:** c

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 **Ans.:** c

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 **Ans.:** d

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

a) Copy constructor b) Friend constructor

c) Default constructor d) Parameterized constructor **Ans.:** b

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. **Ans.:** b

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 **Ans.:** b

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 **Ans.:** c

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.

Ans.: d

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 **Ans.:** c

218. Which of the following is a mechanism of static polymorphism?

a) Operator overloading b) Function overloading

c) Templates d) All of the above **Ans.:** d

219. Which of the following is not a type of inheritance?

a) Multiple b) Multilevel c) Distributive d) Hierarchical **Ans.:** c

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 **Ans.:** b

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. **Ans.:** d

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 **Ans.:** b

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 **Ans.:** c

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 **Ans.:** c

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 **Ans.:** a

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 **Ans.:** c

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 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 **Ans.:** b

Explanation:

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.

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

Ans.: c

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 **Ans.:** d

Explanation:

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'

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 **Ans.:** a

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 **Ans.:** b

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 **Ans.:** c

Explanation:

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

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 **Ans.:** c

Explanation:

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'.

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 **Ans.:** c

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 **Ans.:** a

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 **Ans.:** b

238. A combinational logic circuit which generates a particular binary word or number is

a) Decoder b) Multiplexer c) Encoder d) Demultiplexer **Ans.:** a

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 **Ans.:** d

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) $1 \oplus 1 = 0$ **Ans.:** b

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 **Ans.:** b

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 **Ans.: a**

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) **Ans.:** c

244. Which memory is difficult to interface with processor ?

a) Static memory b) Dynamic memory

c) ROM d) None of these **Ans.:** b

Explanation:

Dynamic memory refreshes periodically so due to refreshment it is difficult to interface it. So answer is 'B'.

245. Desirable characteristic(s) of a memory system is(are)

a) Speed and reliability b) Low power consumption

c) Durability and compactness d) All **Ans.:** d

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 **Ans.:** a

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 **Ans.:** b

Explanation:

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. 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 **Ans.:** b

Explanation:

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

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 **Ans.:** c

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 **Ans.:** b

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 **Ans.:** c

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 **Ans.:** d

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 **Ans.:** b

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 **Ans.:** c

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 **Ans.:** b

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 **Ans.:** c

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 **Ans.:** b

258. The register used as a working area in CPU is

a) Program counter b) Instruction register
c) Instruction decoder d) Accumulator **Ans.:** d

259. The size of program counter (P C) is

a) 8 bits b) 12 bits c) 16 bits d) 32 bits **Ans.:** d

260. 8085 microprocessor has _____ hardware interrupts.

a) 2 b) 3 c) 4 d) 5 **Ans.:** d

261. The register that stores all interrupt requests is :

a) Interrupt mask register b) Interrupt service register
c) Interrupt request register d) Status register **Ans.:** c

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 **Ans.:** c

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 **Ans.:** c

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 **Ans.:** b

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) **Ans.:** 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 **Ans.:** c

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 **Ans.:** b

268. What can we correctly say about proposition P1:

P1 : (p v □q) ^ (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 **Ans.:** c

269. □(P → Q) is equivalent to

a) P ^ □Q b) P ^ Q c) □P v Q d) None of these **Ans.:** a

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 **Ans.:** b

271. HTML stands for?

a) Hyper Text Markup Language b) High Text Markup Language

c) Hyper Tabular Markup Language d) None of these **Ans.:** a

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. **Ans.:** d

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

a) <TD> b)
 c) <P> d) <TR> **Ans.:** c

274. The attribute of <form> tag

a) Method b) Action c) Both (a)&(b d) None of these **Ans.:** c

275. www is based on which model?

a) Local-server b) Client-server c) 3-tier d) None of these **Ans.:** b

276. Which of the following is a container?

a) <SELECT> b) <BODY> c) <INPUT> d) Both (a) and (b) **Ans.:** d

Explanation:

Container tags require opening and closing command eg<body>....</body> , <html>.....</html>

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"> **Ans.:** b

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

a) <LI> b) <OL> c) <LI> and <OL> d) None of these **Ans.:** c

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"> **Ans.:** c

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) **Ans.:** b

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 **Ans.:** a

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 **Ans.:** d

Explanation:

Deadlock doesn't occurs with a single resource

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 **Ans.:** d

Explanation:

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. '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 **Ans.:** a

Explanation:

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. 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 **Ans.:** a

Explanation:

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.

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 **Ans.:** c

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 **Ans.:** c

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 **Ans.:** b

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 **Ans.:** d

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 **Ans.: c**

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 **Ans.: a**

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

a) neural network b) fuzzy logic c) intelligent agent d) genetic algorithms **Ans.:** b

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

a) computer industry b) implementation process

c) Hardware d) software **Ans.:** c

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 **Ans.:** a

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 **Ans.:** b

296. Planning and controlling data centre operations, is

a) operations management b) data center

c) development center d) information center **Ans.:** a

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 **Ans.:** c

298. _____ is not a software quality model.

a) McCall model b) Boehm model c) ISO 9000 d) ISO 9126 **Ans.:** c

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 **Ans.:** b

300. Testing of individual components by the developers are comes under _____

a) Integration testing b) Validation testing

c) Unit testing d) None of mentioned **Ans.:** c

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 **Ans.:** d

302. _____is not Structural Testing?

a) Parallel b) Acceptance c) Stress d) Regression **Ans.:** b

303. Which one is the reputed testing standard?

a) QAI b) M Bridge awards c) ISO d) Microsoft **Ans.:** c

304. Testing which performed first is ---

a) Dynamic testing b) Black box testing

c) White box testing d) Static testing **Ans.:** d

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 **Ans.:** c

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 **Ans.:** b

307. Full form of ITG.

a) individual testing group b) integration testing group

c) instantaneous test group d) independent test group **Ans.:** d

308. Software mistakes during coding are known as _____

a) Errors b) Bugs c) Failures d) defects **Ans.:** b

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

a) Statement Testing b) Decision Testing

c) Condition Coverage d) All of the mentioned **Ans.:** d

Explanation: Statement testing, decision testing, condition coverage all of them uses white box technique.

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 **Ans.:** a

Explanation: Alpha testing takes place at the developer's end. Developers observe the users and note problems. Alpha testing is testing of an application when development is about to complete. Minor design changes can still be made as a result of alpha testing.

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 **Ans.:** b

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

C programming