1. In SQL which of the following commands is mainly used to remove a user-defined object from a database?
   (1) Remove
   (2) Drop
   (3) Delete
   (4) Erase
   (5) Rollback

2. Which of the following phases does not belong to the software development life cycle?
   (1) Testing
   (2) Maintenance
   (3) Marketing
   (4) Coding
   (5) None of these

3. Consider the following encryption alogorithms?
   I. Data Encryption Standard (DES)
   II. Advanced Encryption Standard (AES)
   III. Rivest Shamir Adleman (RSA)
   Choose the option that correctly matches the given algorithms with the type of cryptography (public-key of private key) utilised by them.
   (1) DES & AES: private-key; RSA: public-key
   (2) AES & RSA: private-key; DES: public-key
   (3) DES & RSA : private-key; AES: public-key
   (4) RSA: private-key; DES & AES: public-key
   (5) AES : private-key; DES & RSA : public-key

4. The full form of ISR is ____.
   (1) Information Service Request
   (2) Information Select Routine
   (3) Interrupt Service Service Routine
   (4) Information Service Routine

5. In Oracle, which data type is used to store unstructured binary data?
   (1) INT
   (2) VARCHAR
   (3) DOUBLE
   (4) BLOB
   (5) None of these

6. Which layer of the OSI model defines the language and syntax for programs?
   (1) Data link layer
   (2) Presentation layer
   (3) Application layer
   (4) Session layer
   (5) Transport layer

7. UDP and TCP are categorised under the ____ layer of the OSI model.
   (1) physical
   (2) data link
   (3) application
   (4) transport
   (5) network

8. Which of the following topologies mainly use hub for interconnection of resources?
   (1) Ring topology
   (2) Bus topology
   (3) Tree topology
   (4) Star topology
   (5) Mesh topology

9. 'ACID' is a set of properties of database transactions intended to guarantee validity even in the event of errors, power failures, etc. The alphabet 'A' in the abbreviation 'ACID' stands for
   (1) application
   (2) accessibility
   (3) atomicity
   (4) Advanced
   (5) Automatic

10. Unique IP address is assigned to each host in which of the following layer?
    (1) Network Layer
    (2) Data Link Layer
    (3) Transport Layer
    (4) Application Layer
    (5) physical layer

11. What is the default value for Boolean variable in an array?
    (1) Null
    (2) Zero
    (3) False
    (4) True
    (5) Bit

12. Which of the following library function is used to concatenate two strings in a C program?
    (1) strcpy
    (2) strlwr
    (3) strcmp
    (4) strcat
    (5) strcmp

13. Which of the following functions is used to copy one memory location to another in C++?
    (1) memmove
    (2) memchr
    (3) memcmp
    (4) memcpy
    (5) memset

14. Which of the following is not true regarding an OLTP system?
    (1) OLTP is generally regarded as unsuitable for data warehousing.
    (2) OLTP systems an be repositories of facts and historical data of business analysis.

15. In which of the following joins, the result is generated only when variable matches from both tables?

(1) Inner join

(2) Cross join

(3) Equi-join

(4) Natural join

(5) Outer join

16. The weakening of a signal over the distance it travels is called

(1) attenuation

(2) modulation

(3) demodulation

(4) conditioning

(5) transduction

17. What is the command used to access top element of a stack without deleting it?

(1) peek

(2) is Empty

(3) top Element

(4) is full

(5) pop

18. How many layers are present in a data warehouse system?

(1) 8   (2) 7

(3) 9   (4) 6

(5) 5

19. If h is any hashing function and is used to hash n keys in to a table of size M, where n<=m., the expected number of collisions involving a particular key x is

(1) less than 1

(2) less than n

(3) less than m

(4) less than n/2

(5) greater than n

20. Which of the following SQL statement is used to changed data in a database table?

(3) The purpose of an OLTP system is to run day-to-day operations.

(4) The data model of an OLTP system is normalised.

(5) OLTP offers large amounts of raw data.

21. TCP is a _____ oriented protocol.

(1) Data

(2) Network

(3) Sessions

(4) Connection

(5) Application

22. Which of the following algorithm can be used to efficiently calculate single source shortest paths in a Directed graph?

(1) Djikstra

(2) Bellman-Ford

(3) Topological Sort

(4) Strongly Connected Component

(5) None of these

23. In SQL, which command is used to change data in a data table?

(1) UPDATE

(2) INSERT

(3) BROWSE

(4) APPEND

(5) None of these

24. The language used in application programs to request data from the DBMS is referred to as the

(1) DML

(2) DDL

(3) Query Language

(4) DCL

(5) None of these

25. Which of the following protocol is connectionless, low overhead and high speed?

(1) ARP

(2) TCP and ARP

(3) ICMP

(4) UDP

(5) TCP

(1) UPDATE

(2) INSERT

(3) CREATE

(4) TRUNCATE

(5) None of these

26. _____ is the execution of a series of programs each on a set or "batch" of inputs, rather than a single input.

(1) Bath gathering

(2) Bath processing

(3) Batch channelling

(4) Batch networking

(5) None of these

27. Which one of the following is used as a synchronization tool in a multiprogramming environment?

(1) Semaphore

(2) Address bus

(3) ICs

(4) Logic gate

(5) None of these

28. What is the sub-network number of a host with an IP address of 172.16.66.0/21?

(1) 172.16.64.0

(2) 172.16.48.0

(3) 172.16.36.0

(4) 172.16.0.0

(5) None of these

29. Which type of members of a base class is never accessible to a derived class?

(1) Public

(2) Private

(3) Protected

(4) Unique

(5) All of the above

30. When you start up the computer the bootup storage at which the BIOS versions, manufacturer and data are displayed on the monitor is called

(1) Bootstrap

(2) Power on self test (POST)

(3) System configuration

(4) Kernel loading

(5) None of these

31. A _____ means that one record in a particular record type is related to only one record of another record type.

(1) One to one relationship

(2) One to many relationship

(3) Many to one relationship

(4) Many to many relationship

(5) None of these

32. In files, there is a key associated with each record which is used to differentiate among different records. For every file there is at least one set of a key that is unique. Such a Key is called

(1) Unique key

(2) Prime attribute

(3) Index key

(4) Primary key

(5) Null key

33. _____ is primarily used for mapping host names and email destinations to IP address but can also be used for other purposes.

(1) TCP (Transfer Control Protocol)

(2) DNS (Domain Name System)

(3) SHA (Secure hash Algorithm)

(4) Simle Network management Protocol (SNMP)

(5) None of these

34. Override is a method.

(1) for an operation that replaces an inherited method od for the same operation.

(2) for a data that replaces an inherited method for the same operation.

(3) for an operation that takes arguments form library function.

(4) All of these

(5) None of these

35. The word _____ means the ability to take many forms.

(1) Polymorphism

(2) Overloader

(3) Overrider

(4) Aggregation

(5) Generalization

36. Rows of a relation are called

(1) Relation

(2) Tuples

(3) Data structure

(4) An entity

(5) None of these

37. A computer system consisting of its processor, memory and I/O devices accepts data, processes it and produces the output results. Can you tell In which component is the raw data fed?

(1) Mass Memory

(2) Main Memory

(3) Logic Unit

(4) Arithmetic Unit

(5) None of these

38. The mechanical diskette drive in which we insert our diskette is connected to the computer's-bus.

(1) Data

(2) Communication

(3) Address   (4) Parallel

(5) None of these

39. The process of transferring data intended for a peripheral device into a disk (or intermediate store) so that it can be transferred to peripheral at a more convenient time or in bulk is known as

(1) Multiprogramming

(2) Spooling

(3) Caching

(4) Virtual programming

(5) None of these

40. Consider an operation of addition. For two numbers, the operating will generate a sum. If the operand are strings, and the same operation would produce a third string by concatenation. This features is called

(1) Inheritance

(2) Encapsulation

(3) Polymorphism

(4) Binding

(5) None of these

41. Which of the following is not a context free grammar components?

(1) Terminal symbols

(2) Nonterminal symbol

(3) Production line

(4) List

(5) None of these

42. TLB is a high speed cache used to hold recently referenced page table entries a part of paged virtual memory. Inverted page table scheme uses a page table that contains an entry for each physical frame, not for each logical page. This ensures that the table occupies a fixed fraction of memory. The size is proportional to physical memory, not the virtual address space.

(1) Three   (2) Four

(3) Five   (4) Six

(5) More than six

43. Which one is capable of overlapping I/O operation for one job with processor operations for another job?

(1) Register

(2) Operating System

(3) Spooling

(4) Buffering

(5) None of these

44. The TRAP is one of the interrupts available in INTEL 8085. Which of the following statements is true regarding TRAP?

(1) It is level triggered

(2) It is negative edge triggered as well as positive edge triggered

(3) It is positive edge triggered

(4) It is both positive edge triggered and level triggered

(5) None of these

45. They way a particular application views the data from the database that the application uses is a :

(1) Module

(2) Relational model

(3) Schema

(4) Subschema

(5) None of these

46. Each node in a linked list must contain at least

(1) Three fields

(2) Five fields

(3) Four fields

(4) One fields

(5) Two fields

47. Encryption and decryption are functions of the _____ layer.

(1) Transport   (2) Session

(3) Application

(4) Presentation

48. Banker's algorithm for resource allocation deals with _____.

(1) Deadlock prevention

(2) Deadlock avoidance

(3) Deadlock recovery

(4) Mutual exclusion

(5) All of these

49. A(n) _____ is a collection of information that determines which files you can access and which setting you use.

(1) Network

(2) User account

(3) Operating system

(4) File system

(5) None of these

50. Which part of the computer provides only temporary storage of files?

(1) ROM memory

(2) Processor

(3) Hard drive

(4) Mother board

(5) RAM Memory

51. What will be the output of "a" in following code?

```
#include <stdio.h>
int main()
{
int a = 20;
```

```
printf("%d", a);
printf("%d", a);
return 0;
}
```

(1) 20 20

(2) 10 20

(3) 20 10   (4) 10 10

(5) Compilation error

52. Firewall in computer is used for

(1) Security

(2) Data transmission

(3) Authentication

(4) Monitoring

(5) None of these

53. What is ISP and what is their function?

(1) Internal Service Provider: A company which provide internet connection for a fee.

(2) Internet Service Provider: A company which provide internal transferring data service to an organization.

(3) Internet Service Provider: A company which provide internet connection to other people for a fee.

(4) Internal Service Provider: A company provide internal connection to transfer data between two company.

(5) None of these

54. Once the active medium is excited, the first photons of light are produced by which physical process?

(1) Blackbody radiation

(2) Spontaneous emission

(3) Synchrotron radiation

(4) Plank's oscillation

55. Which of the following is not a type of expansion slot or bus design used in Advanced-technology class systems?

(1) PCMCIA

(2) ISA

(3) PROM

(4) EISA

(5) None of these

56. A program that neither replicates or copies itself, but does damage or compromises the security of the computer. Which of the following is that computer virus?

(1) Joke program

(2) Worm

(3) Trojan

(4) Hoax

(5) None of these

57. Which of the following statements should be used to obtain a remainder after dividing 3.14 by 2.1?

(1) rem = 3.14%2.1;

(2) rem=mod(3.14, 2.1);

(3) rem=fmod(3.14.2.1);

(4) Remainder cannot be obtain in floating point decision

58. What should be the output of the following program?

```
#include<stdio.h>
int main()
{
int i = 3, *j, k;
j = &i;
printf ("%d\n", i**j+*j);
return 0;
}
```

(1) 30   (2) 27

(3) 15   (4) 9

(5) 3

59. Which of the following statements are correct about the given program?

```
#include<stdio.h>
int main()
{
int size, i;
scanf("%d",& size);
int arr[size];
for (i=1; k=size; i++)
{
scanf("%d", arr[i]);
printf("%d", [arr[i]);
}
return 0;
}
```

(1) The code is erroneous since the subscript for array used in for loop is in the range 1 to size.

(2) The code is erroneous since the values of array are getting scanned through the loop.

(3) The code is erroneous since the statement declaring array is invalid.

(4) The correct and runs successfully.

(5) None of these

60. Which of the following two library functions are used to dynamically allocate memory?

(1) malloc and memalloc

(2) alloc and memalloc

(3) malloc and calloc

(4) memalloc and faralloc

(5) None of these

ANSWERS

1. (2)	2. (3)	3. (1)	4. (3)
5. (4)	6. (3)	7. (4)	8. (4)
9. (3)	10. (1)	11. (3)	12. (4)
13. (4)	14. (1)	15. (1)	16. (1)
17. (1)	18. (1)	19. (1)	20. (1)
21. (4)	22. (3)	23. (1)	24. (1)
25. (4)	26. (2)	27. (1)	28. (1)
29. (2)	30. (2)	31. (1)	32. (4)
33. (2)	34. (1)	35. (1)	36. (2)
37. (2)	38. (2)	39. (2)	40. (3)
41. (4)	42. (*)	43. (3)	44. (4)
45. (4)	46. (5)	47. (4)	48. (2)
49. (2)	50. (5)	51. (4)	52. (1)
53. (1)	54. (2)	55. (3)	56. (3)
57. (3)	58. (3)	59. (3)	60. (3)

— EXPLANATIONS —

1. (2) The SQL DROP command is used to remove an object from the database. If you drop a table, all the rows in the table is deleted and the table structure is removed from the database. When a table is dropped all the references to the table will not be valid.

2. (3) 'software development life cycle,' these six steps include planning, analysts, design, development & implementation, testing & deployment and maintenance.

3. (1) DES and AES uses symmetric or Secret or private key cryptography. RSA and DSS are the most widely used public key encryption algorithms.

4. (3) ISR. Stands for "Interrupt Service Routine." An ISR (also called an interrupt handler) is a software process invoked by an interrupt request from a hardware device.

5. (4) SQL data types that are ideal for large amounts of unstructured binary data include the BLOB data type (Binary Large Object) and the BFILE data type (Binary File object).

6. (3) The application layer of the OSI model provides a framework to run application programs. It defines the language and syntax used by programs to communicate with supplementary programs.

7. (4) The transport layer controls the reliability of communications through flow control, segmentation, and error control. Two great examples of transport protocols are TCP (as in TCP/IP) and UDP. TCP, or the Transmission Control Protocol, is connection oriented. UDP, or the User Datagram Protocol, is not connection oriented.

8. (4) Star network consists of one central hub which acts as a conduit to transmit messages. In star topology, every host is connected to a central hub.

9. (3) In the context of transaction processing, the acronym ACID refers to the four key properties of a transaction: atomicity, consistency, isolation, and durability.

10. (1) At the network layer, a global addressing system that uniquely identifies every host on the network. The Internet address (or IP address) is 32 bits (for IPv4) that uniquely and universally defines a host or router on the Internet.

11. (3) By default, the value of boolean primitive type is false.

12. (4) You can concatenate two strings easily using standard library function strcat()of string. h header file.

13. (4) The memcpy function is used to copy a block of data from a source address to a destination address.

14. (1) DBMS built for online transaction processing (OLTP) is generally regarded as unsuitable for data warehousing because each system is designed with a differing set of requirements in mind e.g.: OLTP systems are design to maximize the transaction processing capacity. OLTP holds current data whereas data warehousing holds historical data. OLTP supports day-to-day decisions and serves large number of clerical/operation users.

15. (1) If C = innerjoin(A,B) creates the table or timetable. C, as the inner join between A and B by matching up rows using all the variables with the same name as key variables. You can perform inner joins only on certain combinations of tables and timetables. If A is a table, then B must be a table. Innerjoin returns C as a table.

16. (1) Attenuation is a general term that refers to any reduction in the strength of a signal. Attenuation occurs with any type of signal, whether

(1) The code is erroneous since the subscript for array used in for loop is in the range 1 to size.