Computer Aptitude Important Questions - 2

1. A **super key** in a relational database is:
   A. A single attribute only that uniquely identifies a record
   B. A set of one or more attributes that collectively identify a record uniquely
   C. A key that is always the primary key
   D. A key that is always a foreign key
   Answer: B

2. Which key is a **minimal** super key, i.e., no attribute can be removed without losing the unique identification property?
   A. Foreign key
   B. Candidate key
   C. Sub key
   D. Alternate key
   Answer: B

3. A **foreign key** in one table is always:
   A. A super key in another table
   B. A primary key in another table
   C. An alternate key in the same table
   D. A candidate key in another table
   Answer: B

4. If ID is unique for every person, which of the following is **also** a super key?
   A. ID
   B. (CITY, ID)
   C. (ID, NAME)
   D. All of the above
   Answer: D

5. Which of these **cannot** be a super key?
   A. NAME (if names are not unique)
   B. (CITY, ID)
   C. ID
   D. (ID, CITY, NAME)
   Answer: A

6. Which of the following is the standard language used to query and retrieve information from a relational database?
   A. SQL
   B. HTML
   C. XML

D. PHP

Answer: A

7. In database systems, the language used to **request** specific information is called:
   A. Query Language
   B. Compiler Language
   C. Assembly Language
   D. Machine Language

   Answer: A

8. In the relation `Student(ID, name, dept_name, tot_cred)`, which attribute should be chosen as the **primary key**?
   A. name
   B. dept_name
   C. tot_cred
   D. ID

   Answer: D

9. The _____ operation allows combining two relations by merging pairs of tuples, one from each relation, into a single tuple.
   A. Select
   B. Join
   C. Union
   D. Intersection

   Answer: B

10. Which of the following join types returns only the rows with matching values in both tables?
    A. INNER JOIN
    B. LEFT JOIN
    C. FULL JOIN
    D. CROSS JOIN

    Answer: A

11. What is the main difference between a **JOIN** and a **UNION** in SQL?
    A. JOIN combines rows based on related columns, UNION combines results of queries
    B. JOIN removes duplicates, UNION does not
    C. JOIN works only on numeric data, UNION works on all data types
    D. There is no difference

    Answer (A) . JOIN combines rows based on related columns, UNION combines results of queries

12. A _____ is a pictorial depiction of the schema of a database that shows the relations, their attributes, primary keys, and foreign keys.
    A. Schema diagram
    B. Relational algebra
    C. Database diagram
    D. Schema flow
    Answer: A

13. Which diagram is commonly used to visually represent entities, attributes, and relationships in a database?
    A. Flowchart
    B. Entity-Relationship (ER) diagram
    C. Network diagram
    D. Gantt chart
    Answer: B

14. How do structures and classes differ in terms of member access in C++?
    A. In structures, members are public by default; in classes, members are private by default
    B. In structures, members are private by default; in classes, members are public by default
    C. Both structures and classes have members public by default
    D. Both structures and classes have members private by default
    Answer: A

15. In C++, wrapping data and its related functions into a single unit is called:
    A. Abstraction
    B. Encapsulation
    C. Polymorphism
    D. Modularity
    Answer: B

16. What is the main benefit of encapsulation in C++?
    A. Code reuse
    B. Hiding data implementation from outside access
    C. Overloading functions
    D. Creating base and derived classes
    Answer: B

17. Which principle of OOP helps in organizing code into logical, manageable pieces?
    A. Polymorphism
    B. Modularity
    C. Encapsulation
    D. Abstraction
    Answer: B

18. Which of the following is an example of polymorphism?
    A. Function overloading
    B. Data hiding
    C. Encapsulation
    D. Code modularity
    Answer: A

19. Which type of polymorphism occurs when multiple functions have the same name but different parameters?
    A. Run-time polymorphism
    B. Function overloading (Compile-time polymorphism)
    C. Data hiding
    D. Inheritance
    Answer: B

20. Which programming language supports multiple inheritance directly?
    A. Java
    B. C++
    C. C#
    D. JavaScript
    Answer: B

21. Which of the following represents **multiple inheritance**?
    A. A -> B -> C
    B. A -> B; A -> C
    C. A, B -> C
    D. B -> A
    Answer: C

22. Which concept allows multiple functions with the same name but different parameter lists?
    A. Encapsulation
    B. Function overloading
    C. Inheritance
    D. Data hiding
    Answer: B

23. 20. Which of the following explains Polymorphism?
    A. int func(int, int); float func1(float, float);
    B. int func(int); int func(int);
    C. int func(float); float func(int, int, char);
    D. int func(); int new_func();
    Correct Answer (A) int func(int, int); float func1(float, float);

24. In OOPs which concept allows you to reuse the written code?
    A. Encapsulation
    B. Abstraction
    C. Inheritance
    D. Polymorphism

    Correct Answer – (C) Inheritance

25. _____ computing refers to applications and services that run on a distributed network using virtualized resources.

    A. Distributed
    B. Cloud
    C. Soft
    D. Parallel

    Correct Answer - B. Cloud

26. The huge number of devices connected to the Internet of Things has to communicate automatically, not via humans. What is this called?
    A. Skynet
    B. Bot 2 Bot
    C. Machine 2 Machine
    D. Intercloud
    Correct Answer - C. Machine 2 Machine

27. Internet of Things needs a lot of network connection. What is the proposed "white Space" radio standard called? www.myeducationwire.com
    A. Bluetooth
    B. WiMax
    C. Weightless
    D. Zigbee
    Correct Answer - C. Weightless

28. Which of the following cloud concept is related to pooling and sharing of resources?
    A. Polymorphism
    B. Abstraction
    C. Virtualization
    D. None of the above
    Correct Answer - C. Virtualization

29. _____ is a community that is working together to establish an IoT architecture.
    A. Eclipse IoT

B. Red Hat
C. Intercloud
D. Bot 2 Bot
Correct Answer - A. Eclipse IoT

30. _____ is a framework for performing remote procedure calls and data serialization.
    A. Drill
    B. BigTop
    C. Avro
    D. Chukwa
    Correct Answer - C. Avro

31. _____ can best be described as a programming model used to develop Hadoop-based applications that can process massive amounts of data.
    A. MapReduce
    B. Mahout
    C. Oozie
    D. All the above
    Correct Answer - A. MapReduce