2024
INFORMATICS PRACTICES

Totalmarks:70   Time:3hours

Generalinstructions:
i)   *Approximately 15 minutes is allotted to read the question paper and revise the answers.*
ii) *The question paper consists of 22 questions. All questions are compulsory.*
iii) *Marks are indicated against each question.*
iv) *Internal choice has been provided in some questions.*

N.B:Check that all pages of the question paper is complete as indicated on the top left side.

1. **Choose the correct answer from the given alternatives:**   **10x1=10**

    (a) IP version 6 address is a _____ byte address.
         i)   four   ii)   six
         iii) eight   iv)   sixteen

    (b) Which of the following is not true about open source software?
         i)   Freedom to use   ii)   Freedom to modify
         iii) Freedom to share   iv)   Freedom to sale

    (c) Which of the following is not a swing class?
         i)   JFrame   ii)   JLabel
         iii) JButton   iv)   ListBox

    (d) Which of the following is not a property of OOPS?
         i)   Inheritance   ii)   Polymorphism
         iii) Seperation   iv)   Abstraction

    (e) Which statement is used to retrieve data from a table?
         i)   SELECT   ii)   READ
         iii) DISPLAY   iv)   EXTRACT

    (f) CSS is an acronym of _____.
         i)   Cascading Style Sheet   ii)   Cascading Style Syntax
         iii) Changing Style Sheet   iv)   None of these

    (g) Identify the odd one out.
         i)   ODBC   ii)   MySQL/NET
         iii) JDBC   iv)   PHP

    (h) Which of the following is not a valid join in MySQL?
         i)   INNER join   ii)   SELF join
         iii) OUTER join   iv)   ALPHA join

(i)   Relation produced from an E-R model will always be in _____.
    i)   1NF   ii)   2NF
    iii)   3NF   iv)   4NF

(j)   Which of the following is a magic number in the context of Mind Reader Game application?
    i)   9   ii)   18
    iii)   45   iv)   all of these

2.   Explain in brief the following components of Event driven programming:
i) Event source object ii) Event object   **2**

3.   Differentiate between Static binding and Dynamic binding.   **2**

4.   What are horizontal scaling and vertical scaling?   **2**

5.   Define e-Business. Name one popularly used e-Business website.   **2**

6.   Write short notes on: i) ORDER BY clause   ii) GROUP BY clause.   **2**

7.   Explain the purpose of the following numeric functions:
i) FLOOR ( )   ii) CEILING ( )   **2**

8.   What are the statements that provide control over use of transactions? **2**

9.   Define BCNF and Fourth Normal Form.   **2**

10.   What is normalization?   **2**

11.   Define the following data structure design: **2**
i) Char MagicSymbol   ii) int [ ] RandomSymbols

12.   Describe the module design methods used in Mind Reader Game application. **2**

13.   **a.** Explain the following networking devices:
    i) Repeater   ii) Router   iii) Modem
                    Or   **3**
   b. Explain any three open source programming languages.

14.   **a.** What is the purpose of switch statement in Java? Write its syntax.
                    Or   **3**
   b. Discuss any three methods of JLabel class.

15.   Define Logical operators in MySQL? List the different logical
        operations used in MySQL.   **3**

16.   What will be the output of the following SQL statements?   **3**
        i) SELECT POWER (2, 10);   ii) SELECT MID ('SRIGANESH',1, 3);
        iii) SELECT LPAD (120,'0', 5);

17.   **a.**   What is ENUM constraint? Explain it with an example.
                                        Or   **3**
        b.   Write short notes on: i) SET constraint   ii) Default constraint
                iii) Foreign key constraints

18.   Define the following terms: **3**
        i)De-normalization   ii) Insertion anomaly
        iii) First Normal Form (1NF)

19.   **a.**   What is Denial of Service(DoS) Attack? Explain the different types of
                DoS attack.
                                        Or   **5**
        b.   Write down five disadvantages of open source software.

20.   **a.**   Discuss any five methods of JComboBox Class.
                                        Or   **5**
        b.   What are the different properties of constructors?

21.   **a.**   Define a data driven application. Explain the various layers of data
                driven application.
                                        Or   **5**
        b.   Mention any five advantages of internet.

22.   **a.**   Describe the different elements of a database table.
                                        Or   **5**
        b.   What is a transaction? What are the different properties of a transaction?

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