II PU COMPUTER SCIENCE – MODEL PAPER

PART – A

Answer all the questions. Each question carries one mark.   **1 x 20 = 20**

I Select the correct answer from the choices given: *(Repeated answers will not be considered)*

1. Which among the following is the fastest memory in a computer that holds information?

   a) Register   b) Cache

   c) Main memory   d) RAM

2. The other name of Boolean algebra is _____

   a) Switching algebra   b) Relational Algebra

   c) Digital Algebra   d) None of the above

3. The other name of NOT gate is _____

   a) Neglect gate   b) Inverter gate

   c) XOR gate   d) XNOR gate

4. The data structure that allows the insertion, as well as the deletion from both the ends, are:

   a) String   b) Linked List data structure

   c) Stack data structure   d) Dequeue data structure

5. What is the other name used for functions inside a class?

   a) Member variables   b) Member functions

   c) Class functions   d) Class variables

6. Function cannot be overloaded when _____

   a) Function names are same   b) Number of parameters are different

   c) Number of parameters are same   d) Data types of parameters are different

7. The symbol used with constructor is _____

   a) $ b) &

   c) Delta   c) ~

8. Base class is _____

   a) a sub class   b) inherited class

   c) Main class   d) First class

9. Which of the following is the correct way to declare a pointer?

   a) int *ptr   b) int ptr

   c) int &ptr   d) All of the above

10. _____ is called information.

    a) Raw fact   b) collection of data

    c) Unprocessed data   d) Processed data

11. SQL is _____.

    a) Theoretical Language   b) Procedural Language

    c) Structured Language   d) Unstructured Language

12. FTP stands for _____

    a) Final Transistor Protocol   b) File Transformation Protocol

    c) File Transfer Protocol   d) File Transaction Protocol

13. Which of the following is not a type of network?

    a) LAN   b) MAN

    c) PAN   d) VAN

14. A software and coding which is freely available on internet is _____.

    a) Community Software   b) Free Software

    c) Open-Source Software   d) Unlicensed Software

15. HTML stands for _____

    a) Hyper Text Makeup Language   b) Hyper Text Markup Language

    c) Hyper Text Marking Language   d) Hyper Text Marker Language

II Fill in the blanks choosing the appropriate word/words from those given in brackets.

(Repeated answers will not be considered)

(Security, Redundancy, DBMS, Database, Table)

16. Collection of rows and columns is called as _____

17. _____ is a collection of interrelated data.

18. Data duplication is called as _____.

19. _____is a software for creating and managing databases.

20. Protection of data is the _____.

PART – B

Answer any FOUR questions. Each question carries two marks.   **2 x 4 = 8**

21. Prove $\overline{\overline{X}} = X$.

22. Define tautology and fallacy.

23. What is encapsulation? Give an example.

24. What is destructor? Give example for destructor.

25. Mention any two functions of ifstream and give their meaning.

26. Give any two advantages of database system.

27. Give the syntax and example for INSERT command in SQL.

28. Briefly explain circuit switching.

PART – C

Answer any FOUR questions. Each question carries three marks.   **3 x 4 = 12**

29. Briefly explain any three types of mother board.

30. Write the logic diagram and the truth table for XOR gate.

31. Give the memory representation of stack data structure.

32. Mention any three advantages of pointers.

33. What is a data file? Differentiate between text and binary files.

34. Give the meaning for any three components of E-R diagram.

35. What is e-commerce? Explain any one type of e-commerce.

36. Explain any three table tags in HTML.

PART – D

Answer any SIX questions. Each question carries five marks.   **5 x 6 = 30**

37. Give the Boolean function $F(A,B,C,D) = \Sigma(0,2,5,7,8,10,13,15)$.
    Reduce it by using Karnaugh map (K-Map).

38. Explain any five operations performed on primitive data structure.

39. Write an algorithm to delete a data element from an array.

40. Give the differences between procedural programming and object-oriented programming.

41. With an example explain member function inside the class definition.

42. What is a friend function? Mention the characteristics of a friend function.

43. What is a parameterized constructor? Mention the advantages of parameterized constructor.

44. What is inheritance? Explain any two types of inheritance.

45. Differentiate between manual and electronic data processing.

46. Explain CREATE and UPDATE commands in SQL.

47. Explain the following:
    i. SMS   ii. E-mail   iii. Voice mail   iv. Chat   v. Video conference

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