Tsl11CS

Tenkasi District
Common First Revision Test - January 2025

Standard 11
COMPUTER SCIENCE

Time Allowed: 3.00 Hours

Maximum Marks: 70

Part - A

Answer all the questions: 15×1=15

1) Which one of the following tracks a user visits a website?
   a) spyware   b) cookies   c) worms   d) trojans
2) Which of the following derives a class student from the base class school?
   a) school : student   b) class student : public school
   c) student : public school   d) class school : public student
3) Which of the following operator cannot be overloaded?
   a) Size of   b) Scope operator
   c) Ternary operator   d) All the above
4) Which of the following access specifier protects data from inadvertent modification?
   a) private   b) protected   c) public   d) global
5) Insulation of data from direct access by the program is called as
   a) Data hiding   b) Encapsulation   c) Polymorphism   d) Abstraction
6) In Dev C++ the memory space allocated for an array int age[5] is
   a) 20 byte   b) 10 byte   c) 24 byte   d) 40 byte
7) Which is the return data type of the function prototype of add (int, int);?
   a) int   b) float   c) char   d) double
8) Which of the following for loop is empty loop?
   a) for (i=0; ; ++i)   b) for (i=0; i<=5; i++)
   c) for (i=0; i<=5; i++);   d) for (; ;)
9) Which of the following is not a data type modifier?
   a) signed   b) int   c) long   d) short
10) The extraction operator in C++ is
    a) >>   b) <<   c) <>   d) ^^
11) If C is false just before the loop the control flows through
    1 S1
    2 While C
    3 S2
    4 S3
    a) S1 ; S3   b) S1 ; S2 ; S3   c) S1; S2; S2; S3   d) S1; S2; S2; S3
12) The shortcut key used to rename file in windows
    a) F2   b) F4   c) F5   d) F6
13) Monitor and LCD projector are connected the computer through
    a) VGA connector   b) USB port   c) Ps/2 port   d) SCSI port
14) $A + \overline{A} \cdot B =$
    a) $\overline{A} \cdot B$ b) $A+B$ c) A d) $\overline{A} + B$
15) The expansion of ENIAC
    a) Electronic Numerical Integrator and Calculator
    b) Electrical Numerical Integrator and Calculator
    c) Electronic Numerical Integrator and Calculation
    d) Electronic Numerical Integration and Calculation

Part - B

Answer any six questions. Question No. 24 is compulsory: 6×2=12

16) Write the 1's complement procedure.
17) What is Boolean Algebra?
18) What is multi-processing?
19) Define loop invariant.
20) What is the use of void data type?
21) Write about strcpy() function.
22) Define Array.
23) Define software piracy.

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24) What is the size of the objects S1, S2?

```
class sum
{
    int n1, n2;
    public
        void add ()
        (int n3 = 10, n1=n2=10,)
} S1, S2;
```

Part - C

Answer any six questions. Question number 33 is compulsory:　　　　6×3=18

25) Write a short note on e-Governance
26) What are the points to be noted while deriving a new class?
27) List some features of modular programming
28) What are the information the prototype provides to the compiler?
29) Write the syntax and purpose of switch statement
30) Write a short note on impact printer
31) List out the key features of operating system.
32) Differentiate Application window and document window.
33) Convert (BBC)$_{16}$ into its equivalent Binary number.

Part - D

Answer all the questions:　　　　5×5=25

34) Explain the basic components of a computer with a neat diagram.　　**(OR)**
    Explain the process management algorithm in operating system.

35) Explain the fundamental gates with expression and truth table.　　**(OR)**
    Explain the different ways of finding files and folder.

36) Write the specifification of an algorithm hypotenuse whose inputs are the length of the two shorter sides of a right angled triangle and the output is the length of the third side.　　**(OR)**
    Write about Binary operators in C++.

37) Explain the different types of inheritance.　　**(OR)**
    What are the rules for operator overloading?

38) What is Recursion? Write a program to find the factorial of the given number using recursion?　　**(OR)**
    What will be the output of the following program?

```
# include <iostream>
# include <conio>
using namespace std
class add
{
    int a, b;
    public :
        int sum;
        void getdata ( )
        {
        a=5;
        b=10;
        sum=a+b;
        }
} a1;
add a2;
int main ( )
{
add a3;
a1.getdata ( );
a2.getdata ( );
a3.getdata ( );
cout<<a1.sum;
cout<<a2.sum;
cout<<a3.sum;
return 0;}
```

Tenkasi District

First Revision Test – 2025

XI Computer Science – Answer key.

Part–A

		marks
1.	b) Cookies.	1
2.	b) Class Student : public school	1
3.	d) All the above.	1
4.	a) Private.	1
5.	a) Data hiding	1
6.	a) 20 byte.	1
7.	a) int.	1
8.	c) for (i=0; i< =5; i++);	1
9.	b) int.	1
10.	a) >>	1
11.	a) S1 ; S3	1
12.	a) F2	1
13.	a) VGA Connector	1
14.	b) A+B	1
15.	a) Electronic Numerical Integrator and Calculator	1

Part–B

16. Step 1. Convert given Decimal number into Binary
Step 2. Check if the binary number contains 8 bits
if less add .0 at the left most bit, to make
it as 8 bits.
Step 3. Invert all bits [change 1 as 0 and 0 as 1) (1a)

— 2marks

17. Boolean algebra is a mathematical discipline
12. that is used for designing digital circuits
in a digital computer.

— 2marks.

18. * This is a one of features of operating
system
* It has two or more processors
for a single running process (job)

Processing takes plex in parallel is known as Parallel Processing.

— 2 marks.

19. An Invariant for the loop body is known as a loop invariant.

(or)

The property of the variables which remains unchanged by the execution of the loop body is called the as loop Invariant.

— 2 marks.

20. 1. To indicate the function does not return a value.
2. To declare a generic pointer.

— 2 marks.

21. The Strcpy() function takes two arguments: target and source.

(or)

Strcpy (Target String, Source String)

It copies the Character String pointed by the source to memory location pointed by the target.

— 2 marks.

22. *An array is Collection of variables of the same type that are referenced by a common name.

* In An array the value are stored in a fixed number of elements of the same type sequentially in memory.

— 2 marks.

23. * Software Piracy is about Copyright violation of Software created Originally by an Individual or an Institution. (OR)

* It includes Stealing of Codes/Programs and other Information illegally and Creating duplicate Copies by unauthorized means and utilizing this data either for one's own benefit or for commercial profit.

— 2marks

24. $S_1 = 8$ bytes, $S_2 = 8$ bytes.

$\boxed{\text{— 3 marks}}$

Part-C

25.
* Getting Government services through Internet is known as e-Governance
* Govt of Tamil nadu has been giving its services through Internet.
* One can communicate with Govt of Tamilnadu from any corner of the world.
* One can get important announcements Government orders, and government welfare schemes from the web portal of Govt. of Tamil nadu.

$\boxed{\text{— 3 marks}}$

26.
1. The keyword class has to be used
2. The name of the derived class is to be given after the keyword class
3. A single colon (:)
4. The type of derivation (the visibility mode), namely private, public or protected.
5. The name of the base class (parent class)

class derived_class_name: visibility_mode base_class_name { // members of derived class };

$\boxed{\text{— 3 marks}}$

27.
* emphasis on algorithm rather than data
* Programs are divided into individual modules
* Each modules are independent of each other and have their own local data
* modules can work with its own data as well as with the data passed it.
Example : Pascal and C

(any 3 points) $\boxed{\text{— 3 marks.}}$

28. The function Prototype provides details about the return data type, name of the function and list of formal parameters or arguments
(Example): int display (int, int)
(or) any example
~~The return value of~~ * The return value of the function is type int.
* display the name of function
* The function is called with two arguments of int data type.
Syntax: — 3 marks.

29. Switch (expression) {
    case Constant 1:
        Statement (S);
        break;
    Case Constant 2:
        Statement (S);
        break;
    default:
        Statement (S); }   — 2 marks
Purpose of Switch statement:
* It Provides an easy way to dispatch execution to different parts of code based on the value of the expression (or)
The switch statement replaces multiple if-else sequence
                          — 1 marks.

30. * These Printers print with striking of hammers or pins on ribbon
* These Printers can print on multiform using carbon papers by using mechanical Pressure
* (Example): Dot matrix printers; Line matrix printers
                          { 3 marks.

31.
- User Interface
- memory Management
- Process management
- File management
- Security management
- Fault tolerance.

— $6 \times \frac{1}{2}$ = $\boxed{3 \text{ marks}}$

32.

Application window	Document window
1. An Application window contains an open application.	A document window is a section of screen used to display the contents of document.
2. The larger window is called application window	The smaller window, which is inside the application window is called Document window.
3. This window helps the user to communicate with the application Program.	The smaller window is used for typing, editing, drawing, and formatting the text and graphics.

(or) any 3 points $\boxed{- 3 \text{ marks}}$

33.

    8   B   C
    ↓   ↓   ↓
    1000   1011   1100

$(8BC)_{16} = (000101111100)_2$

$\boxed{- 3 \text{ marks}}$

Part-D

34) a) Components of Computer with a Diagram $\boxed{- 2 \text{ marks}}$

Components
1. Input unit   3. Output Unit
2. Central Processing unit   4. memory unit
    (with Explanation)   — $\boxed{3 \text{ marks}}$

(OR)

b)
- FIFO (First in First out)
- SJF (Shortest Job first)
- Round Robin Scheduling
- Based on priority

$\boxed{2 \text{ marks}}$

(Explanation) $\boxed{3 \text{ marks}}$

35) a) Fundamental gates : AND, OR, NOT
    Explain: AND: C = A·B   NOTE C = Ā
          OR : C = A+B
          . Truth Table + Diagram.

                                              [—5marks]

    b) 1. using Search box — Brief explanation   [2 ½ marks]
        2.   ,,   Computer Icon — ,,   ,,   [2 ½ marks]
                (OR)
        Any two Suitable methods

36) a) 1. hy poten ve (a,b):
        2. --input : a,b are real numbers a>0 b>0
        3. --output: $c^2 = a^2 + b^2$ when c is real number,
           C>o (OR)   [—5marks]
           Any suitable Specification

    b) Binary operators — Require two opered
        • Arithmetic operators — +, -, *, /, %
        •   Relational ,,   — >, <, >=, <=, ==, !=
        •   Logical   ,,   — &&, ||
        •   Assignment ,,   — +=, -=, *=, /=, %=
        Explain the above   [—5marks]

37) a) Single inheritance   Hierarchical Inheritance
        multiple ,,   Hybrid ,,
        multilevel ,,   — 2marks (Explaination) —3 marks.

    b) 1. precedence and Associativity of an Operator can not
           be changed
        2. No new operators can be created, only existing operators can
           be over loaded
        3. can not redefine the meaning of an operator
           procedure.
        4. Overloaded operators can not have default arguments
        5. when binary operator overloaded, the left hand
           object must be an object of the relevant Class [—5marks]

38) a) A Function that calls it self is known as recursive
        function. And, this Technique is known as recursion [—2marks]
        factorial program :   [3marks]
                                              —5marks.

    b) 15 15 15

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