Ts11C

Tenkasi District Common Examinations
Common Half Yearly Examination - December 2022

Standard - 11

Time Allowed: 3.00 Hours **COMPUTER SCIENCE** Maximum Marks: 70

PART - I **15×1=15**

Answer all the questions.

1. Which generation of Computer and Microprocessor?
   a) Third b) First c) Fourth d) Second
2. ASCII value of A is _____.
   a) 48 b) 32 c) 97 d) 65
3. Which one determines the amount of RAM that can be accessed by a microprocessor?
   a) Word size b) Clock speed c) Instruction Set d) Registers
4. Which algorithm in designed for time sharing systems.
   a) FIFO b) SJF c) Round Robin d) Based on priority
5. Which versions of windows introduced 64-bit processor?
   a) Windows 2000 b) Windows xp c) Windows 7 d) Windows 8
6. The Shortcut key used to rename a file in Windows
   a) F2 b) F4 c) F5 d) F6
7. Stating the input property and the input-output relation a problem is known as
   a) Specification b) Statement c) Algorithm d) Definition
8. The Smallest individual unit in a program is known as a _____.
   a) Lexical Unit b) Keywords c) Algorithm d) Flowchart
9. How many categories of data types are available in
   a) 5 b) 4 c) 3 d) 2
10. Identify the old one from the following statement.
    a) break b) goto c) switch d) continue
11. Which of the following is the scope operator?
    a) $ b) & c) @ d) ::
12. Structure definition is terminated by
    a) ; b) } c) : d) ::
13. Which amongst the following is executed in the order of inheritance?
    a) Destructor b) Member function c) Constructor d) Object
14. Which one of the following tracks a user visits a website?
    a) Spyware b) Cookies c) Worms d) Trojans
15. Which language has the highest internet adoption level, among the Indian language users?
    a) Tamil b) Hindi c) Kannada d) Telugu

PART - II

Note: Answer any six questions. Question Number 24 is compulsory. **6×2=12**

16. Convert $(57)_{10}$ into Binany number.
17. What is multi-Processing?
18. Distinguish between an algorithm and a process.
19. Define a loop invariant.
20. Define Structure. What is its use?
21. What are called member in class?
22. Why derived class is called power packed class?
23. What is TSCII?
24. What is the output of the following code?

```
for (int i=2; i<=10; i+=3)
cout<<i;
```

PART - III

Note: Answer any six questions. Question Number 33 is compulsory. **6×3=18**

25. Write the significant features of monitor.
26. Differentiate CD and DVD.

27. Write the two ways to create a new folder.
28. What is case analysis?
29. Differentiate "=" and "==".
30. What are the information the prototype provides to the compiler?
31. Define information hiding.
32. Discuss the benefits of constructor overloading.
33. Write a C++ program to sum the numbers from 1 to 10 using 'for' loop.

PART - IV

Answer all the questions. 5×5=25

34. a) i) Convert $(64.64)_{10}$ to binary.
ii) Write the truth table of XOR gate.

(OR)

b) List out the points to be noted while creating a user interface for an operating system.

35. a) Explain the types of errors.

(OR)

b) Explain the parts of a loop.

36. a) Explain the versions of Windows operating system.

(OR)

b) Explain call by value method with suitable example.

37. a) What are the advantages and disadvantages of OOPS?

(OR)

b) Mention the differences between constructor and destructor?

38. a) Explain the different types of inheritance.

(OR)

b) Debug the given C++ program

```
% include (iostream.h)
# include <conio.h>
class A ()
{
public;
int a1, a2:a3;
void get data []
{
a1=15; a2=13, a3=13;}
class B :: public A ()
{
 PUBLIC
  void fun ()
{
 int b1:b2:b3;
  A :: get data [];
 b1=a1;
 b2=a2;
a3=a3;
cout << b1 << 'It' << b2 << 'It' << b3;
}
void main ()
{
B der;
 der 1: func ();
}
```

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XI Computer Science

PART - I

1. c) Fourth
2. d) 65
3. a) word size
4. c) Round Robin
5. b) windows XP
6. a) F2
7. a) Specification
8. a) Lexical Unit
9. c) 3
10. c) switch
11. d) :::
12. a) %
13. c) constructor
14. b) cookies
15. a) Tamil

PART - II

16.

2	57
2	28 - 1
2	14 - 0
2	7 - 0
2	3 - 1
	1 - 1

$(57)_{10} = (111001)_2$ — 2 marks

64	32	16	8	4	2	1
1	1	1	0	0	1	

2 | 57
56
0
28

17. Multi Processing:

* It has two or more processors for a single running process
* Processing takes place in parallel is known as

— 2 marks

Parallel Processing:

18 Algorithm

* An algorithm is a sequence of instructions to accomplish a task or solve problem — 1 marks

Process.

When the algorithms are executed / a process evolves which accomplishes the intended task or solves the given problem. — 1 marks

19 loop variant:

An invariant for the loop body is known as a loop invariant. — 2 marks

20 * Structure is a user defined which has the combination of data items with different data types

* This allows to group variables of mixed datatypes together into a single unit. — 2 marks

21 * Class comprises of members called as Data members and member functions (OR)

* Data members are the data variables that represent the features or properties of a class. — 2 marks

22 * The derived class inherits all properties of the base class

* It is a power packed class, as it can additional attributes and methods and thus enhance its functionality. — 2 marks

23. * Tamil Script code for Information Interchange is the first encoding system to handle our Tamil language. — 1 marks

* This calling scheme was registered in IANA (Internet Assigned Number Authority) a unit of ICANN - 1 marks

24. 2 5 8 - 2 marks

Part - III

25. * It is the most commonly used output device to display the information

* It looks like a TV. pictures a monitor formed with picture elements called pixels

Types of Monitors

CRT - Cathode Ray Tube

LCD - Liquid Crystal Display

LED - Light Emitting Diodes

* The Monitor works with the VGA (Video Graphics Array Card). The video graphics card helps the keyboard to communicate with the screen.

any 3 points - 3 marks.

26)

CD	DVD
CD Stands for Compact Disc	DVD Stands for Digital versatile Disc
Capacity: 700MB	Capacity: 4.7 GB
Single layered Sides are usually silver Colored.	Double layered side are usually gold Coloured.

Or any 3 differences 3 marks

27) Create a new Folder:

Method - 1: 1 1/2 marks

1. Open Computers ICON
2. open any drive where you want to create a new Folder

* This coding scheme was registered in IANA (Internet Assigned Number Authority) a unit of ICANN - 1 marks

24. 2 5 8 - 2 marks

Part - III

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Or any 3 differences 3 marks

27) Create a new Folder:

Method - 1: 1 1/2 marks

1. Open Computer Icon
2. open any drive where you want to create a new Folder

3. Click File → New → Folder
4. A new Folder is created with the default Name "New Folder"
5. Type in the Folder Name and press Enter key

Method 2: (1½ marks)

1. In the Desktop, right click → New → Folder
2. A folder appears with the default name "New Folder" and it will be highlighted.
3. Type the name you want and press Enter key
4. The name of the folder will change.

28 Case analysis:

* Case analysis splits the problem into an exhaustive set of disjoint cases
* For each case, the problem is solved independently
* case analysis statement generalizes it to Multiple cases.

(– 3 marks)

29.

	"="	"=="
1.	= is an assignment operator	== is equal to operator and it is a relational operator
2	It is used to assign the value of variable or expression.	It is used for compare two values and the result will be either true or false
3	Example: X=Y (Y value assigned to X)	X==Y (X value will be compared with Y value)

(– 3 marks)

30. 1. The return data type 2. name of the function
3. list of formal parameters or arguments
Example: int display (int, int)

(– 3 marks)

31 * Data and Functions are bound together into a single unit is known as Encapsulation.

* Encapsulation of data from direct access by the program is called data hiding or information hiding.

- 3 marks

32 * A class can have more than one constructor with different signature.

* Constructor overloading provides flexibility of creating multiple type of objects for a class.

- 3 marks

33.
```
#include <iostream>
using namespace std;
int main()
{
  int Sum=0, i;
  for(i=1; i<=10; i++)
  {
    Sum=Sum+i;
  }
  cout<<"The Sum of 1 to 10 is "<<Sum;
  return 0;
}
```

(or) A Program that gives this logic using for loop.

- 3 marks

PART-IV

34) a) i) $(64.64)_{10}$

Integer Part

2	64	
2	32 - 0	
2	16 - 0	
2	8 - 0	
2	4 - 0	
2	2 - 0	
	1 - 0	

$(64)_{10} = (1000000)_2$

Fractional Part

$0.64 \times 2 = 1.28 = 1$
$0.28 \times 2 = 0.56 = 0$
$0.56 \times 2 = 1.12 = 1$
$0.12 \times 2 = 0.24 = 0$
$0.24 \times 2 = 0.48 = 0$
$0.48 \times 2 = 0.96 = 0$
$0.96 \times 2 = 1.92 = 1$
$0.92 \times 2 = 1.84 = 1$

$(0.64)_{10} = (10100011\ldots)_2$

$(64.64)_{10} = (1000000.10100011\ldots)_2$ - 3 marks

ii) b)

XOR gate $C = A \oplus B$

A	B	C
0	0	0
0	1	1
1	0	1
1	1	0

- 2 marks

b) User interface

* It should enable the users to retain this expertise for a longer time
* It should also satisfy the customer hence on their needs
* It should save user's precious time.
* It is also to satisfy the customer
* Reduce number of errors committed by the user

— 5 marks

35) a) Types of Errors

Explain Error details

* Syntax Error
* semantic »
* Runtime »

— 5 marks.

b) Explain the above Parts of loop

* Initialization expression * Update expression
* Test » * The body of the loop

— 5 marks

36) a) Explain the Versions of windows OS

Versions, Year, Specific features

Any 8 versions you write. — 5 marks

b) Call by Value method:

* This method copies the value of an actual parameter into the formal Parameter of the function
* If change made to formal Parameter with in the function will have no effect on the actual Parameter — 5 marks

Any suitable example.

37) a) Advantages & Disadvantages of OOPS

* Reusability
* Redundancy
* Easy maintance

* Security

Disadvantages of OOP:

* Size * Effort * Speed — 5 marks.

b) differences of Constructor & destructor

	Constructor	destructor.
1	No return type can be specified for Constructor	It has no return type
2	A Constructor can have Parameter list	The destructor cannot have arguments
3	The Constructor function can be overloaded	Destructor can not be overloaded
4	The name of the constructor must be same as the class	The destructor has the same name as the class Prefixed by the tilde character ~
5	They can not be inherited but a derived class can call the base class Constructor	They can not be inherited

— 5 marks.

or any 3 differences

38) b) Explain the above inheritance

1. single inheritance
2. Multilevel ,,
3. multiple ,,
4. Hierarchical ,,
5. Hybrid ,,

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b) Sl.No | Line No | Error coding | Corrected coding

1.	1	% include (iostream.h)	#include<iostream>
2.	3	Missing	using name space std;
3.	4	Class AC)	Class A
4.	5	Public;	public:
5.	6	int a1, a2: a3;	int a1, a2, a3;
6.	7	Void get data[]	Void get data()
7.	9	a1=15; a2=13, a3=b;	a1=15, a2=13; a3=13;
8.	12	Class B : PublicA()	class B: public A
9	14	PUBLIC	Public
10	17	int b1: b2, b3;	int b1, b2, b3;
11	18	A : : get data []	A::getdata()
12	21	a3 = a7 ;	b3 = a3;
13	22	Cout << b1 << '\t' << b2 << b2 << '\t' << b3;	Cout << b1 << '\t' << b2 << '\t' << b3;
14	23	Missing	};
15	27	der1: fun();	der1.func();

Or any 10 Errors.

10 × 1/2 = 5 marks

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