HIGHER SECONDARY FIRST YEAR

PUBLIC EXAMINATION – March 2024

COMPUTER SCIENCE KEY ANSWERS

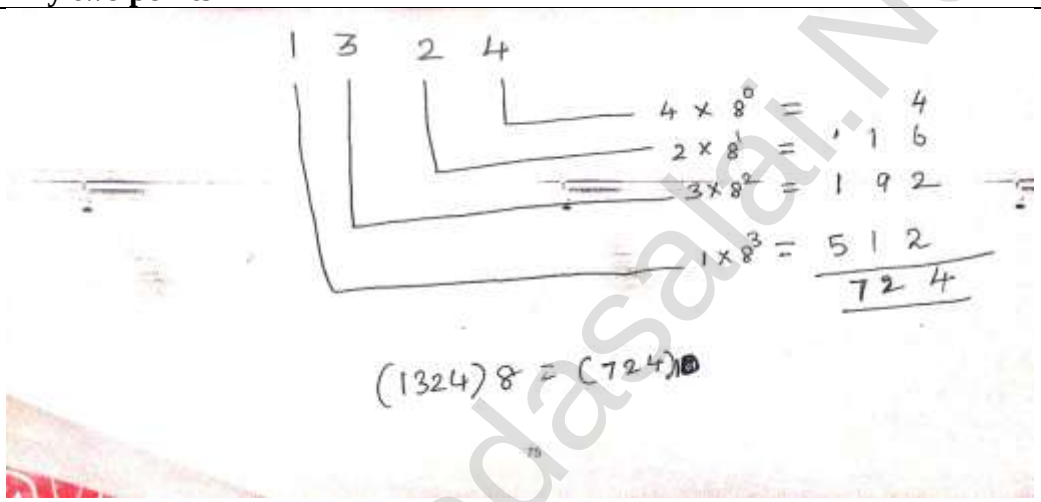
PART-I

Answer All the Questions **15 x 1=15**

Q. NO	OPTION	ANSWER	Mark
1	a	Third	1
2	d	Abstraction	1
3	d	5	1
4	b	::	1
5	d	spam	1
6	d	*	1
7	b	for	1
8	b	Electronic Data Interchange	1
9	d	Encapsulation	1
10	b	55	1
11	b	F2	1
12	a	Copy Constructor	1
13	a	Word length	1
14	d	Graphics User Interface	1
15	a	Pentium III	1

PART-II

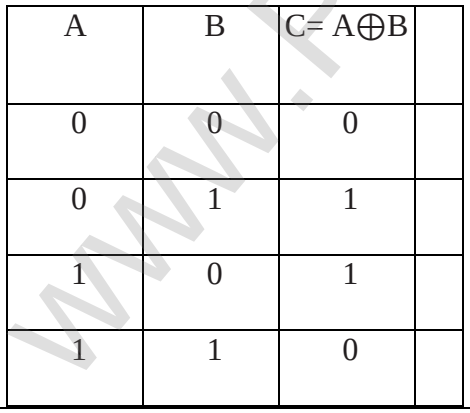
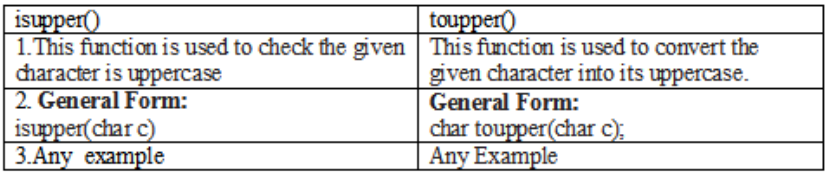
Answer any six questions. Question no 24 is compulsory 6x2=12

Q. NO	ANSWER	Mark
16.	<table><tr><th>Primary memory</th><th>Secondary memory</th></tr><tr><td>1.The primary memory is used to temporarily store the programs and data when the instructions are ready to execute</td><td>The secondary memory is used to store the data permanently.</td></tr><tr><td>2. The Primary Memory is volatile, that is, the content is lost when the power supply is switched off</td><td>The Secondary memory is non volatile, that is, the content is available even after the power supply is switched off.</td></tr><tr><td>3.Example:RAM,ROM</td><td>Example: CDROM,DVDROM etc</td></tr></table> **Any two points**	**2**
17.		**2**
18.	• It is used in computers and laptops that allow same data and applications to be accessed by multiple users at the same time. The users can also communicate with each other.	**2**
19.	• **const** is the keyword used to declare a constant. • const keyword modifies / restricts the accessibility of a variable. So, it is known as Access modifier. **Example** `const int num = 100;`	**2**
20.	➢ To indicate the function does not return a value ➢ To declare a generic pointer	**2**
21.	Commercial programs that are made available to the public illegally are often called **Warez**.	**2**
22.	Google Bing Yahoo	**2**
23.	An algorithm is a sequence of instructions to accomplish a task or solve a problem	**2**

24.	0 1 2 3 4 5 6 7	**2**

PART-III

Answer any six questions. Question no 33 is compulsory **6x3=18**

25.	➢ Recycle bin is a special folder to keep the files or folders deleted by the user, which means you still have an opportunity to recover them. ➢ The user cannot access the files or folders available in the Recycle bin without restoring it. Restore all, empty recycle bin	**3**
26.	i The keyword class has to be used ii The name of the derived class is to be given after the keyword class iii A single colon (:) iv The type of derivation (the visibility mode), namely private, public or protected. If no visibility mode is specified ,then by default the visibility mode is considered as private. v The name of the base class(parent class), if more than one base class, then it can be given separated by comma.	**3**
27.	➢ The state of a process can be represented by a set of variables in an algorithm. ➢ The state at any point of execution is simply the values of the variables at that point. ➢ As the values of the variables are changed, the state changes	**3**
28.		**3**
29.		**3**

A	B	C= A⊕B	
0	0	0	
0	1	1	
1	0	1	
1	1	0	

isupper()	toupper()
1.This function is used to check the given character is uppercase	This function is used to convert the given character into its uppercase.
2. **General Form:** isupper(char c)	**General Form:** char toupper(char c);
3.Any example	Any Example

30.		
	<table><tr><th>CD</th><th>DVD</th></tr><tr><td>1.CD stands for Compact Disc</td><td>DVD stands for Digital Versatile Disc (OR) Digital Video Disc</td></tr><tr><td>2.Capacity:700 MB</td><td>Capacity:4.7 GB</td></tr><tr><td>3.CD data is represented as tiny indentations known as pits</td><td>DVD ,more than six times what a CD can hold.</td></tr><tr><td>4. single-layered sides are usually silver-coloured,</td><td>Double-layered sides are usually gold-coloured</td></tr></table> **Or Any 3 differences**	**3**
31.	➢ Monitor is the most commonly used output device to display the information. Pictures on a monitor are formed with picture elements called PIXELS. Monitors may either be Monochrome which display text or images in Black and White or can be color, which display results in multiple colors. ➢ The monitor works with the VGA (Video Graphics Array) card ➢ . The video graphics card helps the keyboard to communicate with the screen. **types of monitors :** ➢ CRT (Cathode Ray Tube) ➢ LCD (Liquid Crystal Display) ➢ LED (Light Emitting Diodes	**3**
32.	An array is a collection of variables of the same type that are referenced by a common name. In an array, the values are stored in a fixed number of elements of the same type sequentially in memory **Types of Arrays:** One-dimensional arrays Two-dimensional arrays Multi-dimensional arrays	**2** **1**

33, .	**PROGRAM**
	#include <iostream>
	using namespace std;
	int main ()
	{
	int n = 5;
	do
	{
	cout<<n<<", ";
	n--;
	}while (n>=1) ;
	}
	(OR) any suitable program
		3

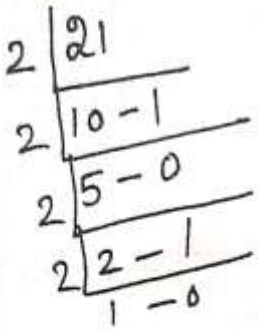
PART-IV

Answer all questions. **5x5=25**

34.a)	**Explanation** 1.Input unit, output unit 2.CPU a.Control unit b.ALU c.Internal memory 3.Memory unit **Diagram**	 1 2 1 1
	The Distributed Operating System is used to access shared data and files that reside in any machine around the world using internet/intranet. The users can access as if it is available on their own computer. **Advantages of distributed Operating System** • A user at one location can make use of all the resources available at another location over the network. • Many computer resources can be added easily in the network • Improves the interaction with the customers and clients. • Reduces the load on the host computer **(Any 3 points)**	**1** **1** **3**

35.a) (i)

35) (a) $(-21)_{10} + (5)_{10}$



Binary representation of $(21)_{10} = (10101)_2$

Binary representation of $(5)_{10} = (101)_2$

8 bit representation $(21)_{10} = 00010101$

1's complement = 11101010

2's complement = 11101011

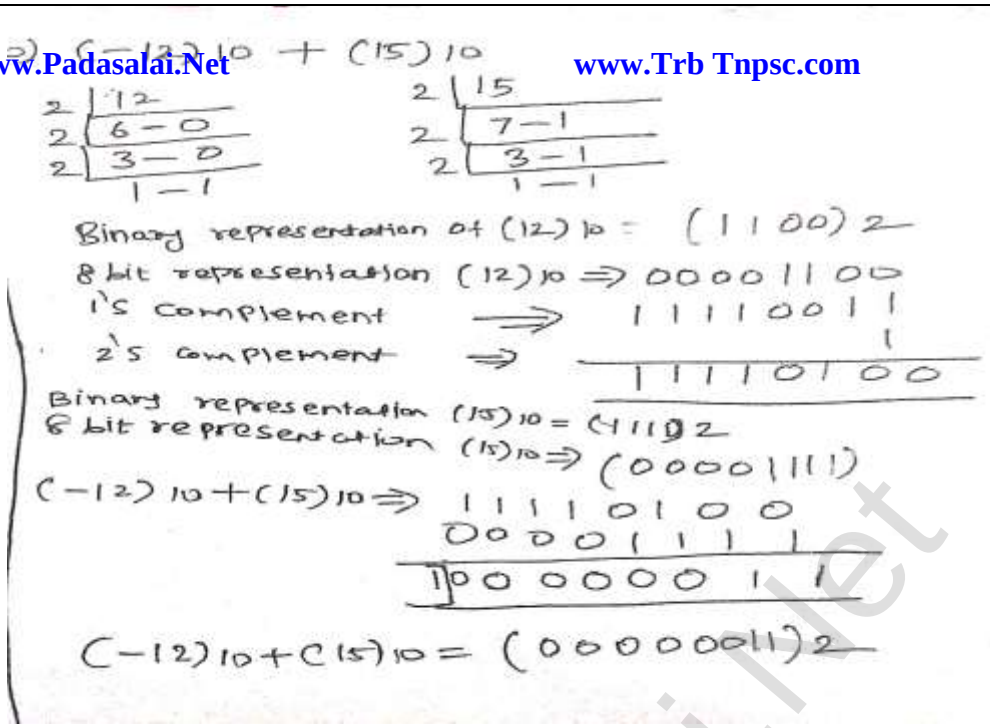
8 bit representation of $(5)_{10} = 00000101$

$(-21)_{10} + (5)_{10} \Rightarrow$

```
  11101011
+ 00000101
------------
  11110000
```

$(-21)_{10} + (5)_{10} = (11110000)_2$

$2^{1/2}$

(ii)		$2^{1/2}$
b)	The ability of the function to process the message or data in more than one form is called as function overloading **Rules for function overloading:** 1.The overloaded function must differ in the number of its arguments or data types 2.The return type of overloaded functions are not considered for overloading same data type 3. The default arguments of overloaded functions are not considered as part of the parameter list in function overloading.	**2** **3**
36.a)	ROM-**R**ead **O**nly **M**emory PROM-**P**rogrammable **R**ead **O**nly **M**emory EPROM-**E**rasable **P**rogrammable **R**ead **O**nly **M**emory EEPROM-**E**lectrical **E**rasable **P**rogrammable **R**ead **O**nly **M**emory **Explain the above types of ROM**	**2** **3**

b)

S.No	If-else	Switch
1	Expression inside if statement decide whether to execute the if block or under else block.	expression inside switch statement decide which case to execute.
2	An if-else statement uses multiple statements for multiple choices	switch statement uses single expression for multiple choices.
3	If-else statement checks for equality as well as for logical expression.	switch checks only for equality.
4	The **if** statement evaluates integer, character, pointer or floating-point type or Boolean type.	switch statement evaluates only character or a integer data type.
5	If the condition is false the else block statements will be executed	If the condition is false then the default statements are executed.

5

37.a) An Output Unit is any hardware component that conveys information to users in an understandable form. **1**

Example: Write any three devices

Output devices

Monitor

Plotter

Printers

Speakers **4**

Multimedia Projectors

(Explain any 3 devices)

b) **Output of the program** **5**

Constructor

Rollno:14

Marks:100

Back to Main

38 a) 1.Single Inheritance **1**

2.Multilevel Inheritance

3.Multiple Inheritance

4.Hierarchical Inheritance

5.Hybrid Inheritance

Explain above points With diagram **4**

38) b)

Line No	Error Coding www.Padasalai.Net	Corrected Coding www.Trb Tnpsc.com
1	%include<iostream>	#include<iostream>
2	using namespace std:	Using namespace std;
3	CLASS Shape	class Shape
5	Private()	Private:
6	int count	int count;
7	Protected;	protected:
10	PUBLIC;	Public:
11	Void setwidth[int w]	void setwidth(int w)
14	};	}
19	}	};
20	Class rectangle:: Public Shape	class rectangle: public Shape
22	Public	public:
23	int getarea []	int getarea( )
26	};	}
27	}	};
28	Int MAIN()	int main( )
30	rectangle rect:	rectangle rect;
33	cout>>"Total area:"<<rect.getarea()<<endl;	cout<<"Total area:"<<rect.getarea( )<<endl;
35	};	}

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Recify any 10 errors(or) write the corrected program with any 10 error rectification