14.03.24.

GOVT. PUBLIC EXAMINATION - 2024

COMPUTER SCIENCE

XI STD - ANSWER KEY.

PART - I.

1) (a) Third generation.
2) (d) Abstraction
3) (d) 5
4) (b) ::
5) (d) spam
6) (d) *
7) (b) for
8) (b) Electronic Data Interchange.
9) (d) Encapsulation
10) (a) 55
11) (b) F2
12) (a) Copy constructor.
13) (a) Word length.
14) (d) Graphics User Interface.
15) (a) Pentium - III.

PART- II.

16) Distinguish Primary and Secondary Memory.

Primary Memory	Secondary Memory.
- Volatile memory - Content is lost when the power supply is switched off. - Eg. RAM.	- Non-Volatile. - Content is not lost - Eg. Hard disk, DVD ROM.

17) $(1324)_8$

$= (1 \times 8^3) + (3 \times 8^2) + (2 \times 8^1) + (4 \times 8^0)$

$= (1 \times 512) + (3 \times 64) + (2 \times 8) + (4 \times 1)$

$= (724)_{10}$ // Answer.

18) Multi-user operating system:

- Use: allow same data and applications to be accessed by multiple users at the same time.
- Eg: Linux and UNIX.

19) Const Keyword:

- Use - to declare a constant.
- This modifiers / restricts the accessibility of a variable.
- Another Name: Access Modifier.

20) Importance of void data type:

- To indicate the funation does not return a value.
- To declare a generic pointer.

21) Warez:

- commercial programs.
- There are made available to the public illegally.

22) Search engines: supported by Tamil language

- Google.
- Bing
- Yahoo.

23) Algorithm:

- Sequence of instructions.
- Use: to accomplish a task or solve a problem.

24) Output:

0
1
2
3
4
5
6
7

Part - III:

25) Recycle bin:

- 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 it without restoring it.
- Restore option is used. to restore. file or folder. from the Recycle Bin.
- To delete all files in it, select Empty the Recycle bin.

26) Points to be noted while deriving a class:

- The keyword class has to be used.
- The name of the derived class is to be given after the keyword class.
- A single colon (:)
- 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.
- The name of the base class, if more than one base class, then it can be given seperated by comma.

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.

28) XOR gate

Input		Output.
A	B	C
0	0	0
0	1	1
1	0	1
1	1	0.

29) difference: isupper() & toupper()

Isupper()	toupper()
- Use: check the given character is uppercase. - Return 1 if true otherwise 0.	- Use: Convert the given character into its uppercase. - Return the upper case equivalent of the given character. - If the given character itself is in uppercase the output will be the same.
- General form: isupper (char c)	General form: char toupper (char c)

30)

CD	DVD.
- full form: Compant Disc. - Capacity: CD-ROM is 700 MB - Single-layered sides are usually silver-Coloured. - CD data is represented as tiny indentations known as "pits".	- full form. - Digital Versatile Disc Capacity: 4.7 GIB. - Double-layered sides are usually gold-coloured. - DVD-ROM can be visually determined by noting the numbe of data sides of th disc.

31) Significant features of monitor:

- Use: display the information.
- It looks like a pictures on a monitor are formed with picture elements called PIXELS.
- Types of monitors: CRT, LCD, LED.
- Monochrome which display text or images in Black & white or can be.

color, which display results in multiple colors.

* It works with the VGA card. The video graphics card helps the keyboard to communicate with the screen.

32) Array:

Collection of variables of the same type that are referenced by a common name.

Types:

- One-dimensional arrays.
- Two-dimensional arrays.
- Multi-dimensional arrays.

33) //C++ program to print numbers from 5 to 1

```
#include <iostream>
using namespace std;
int main()
{
  int i=5;
  do
{
```

```
cout << i << " ";
i--;
}
while (i >= 1);
return 0;
}
```

output.

1 2 3 4 5

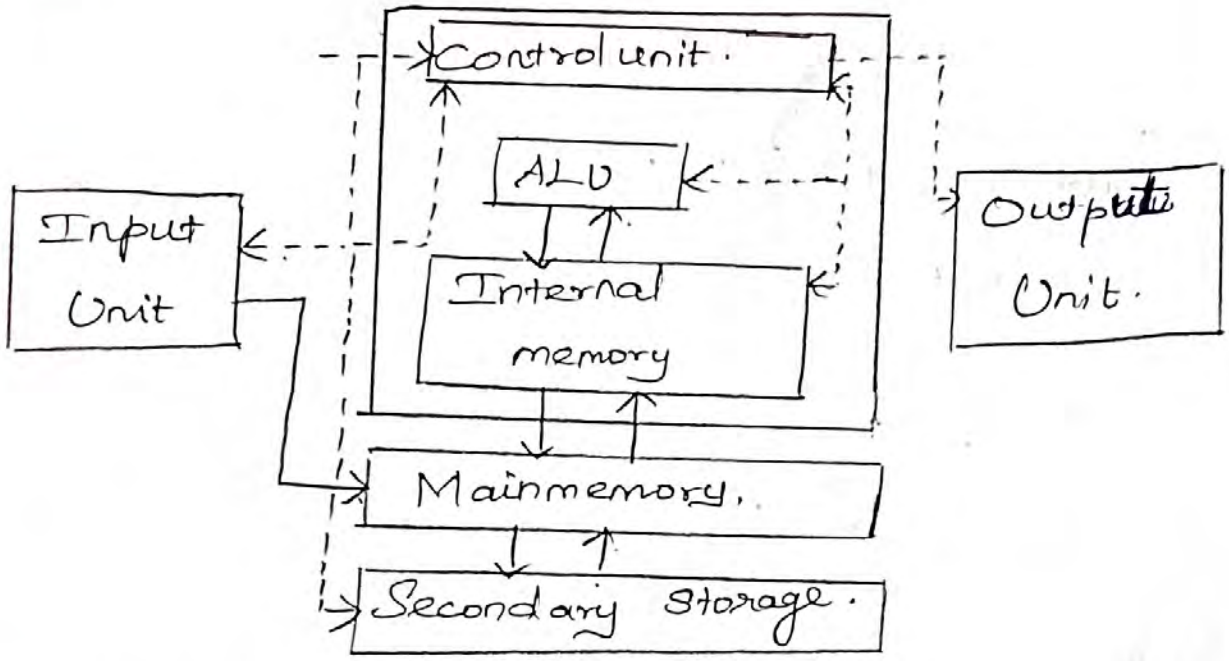
Part - IV.

24) Basic Components of a computer:

(a)

- Input Unit (Eg. keyboard, Mouse).
- Output Unit (Eg. Monitor, Printer).
- CPU (Central Processing Unit.
- Parts of a CPU:
  - Control Unit.
  - Memory Unit.
  - Arithmetic & Logic Unit.
- Types of a memory:
  - Primary Memory. (Eg. RAM
  - Secondary Memory (Eg. DVD ROM

diagram:



34) (b) Concept of a distributed OS along ...

Use: (1) Access shared data & files that reside in any machine around the world.

(2) Handle data from different locations.

Advantages:

(1) We can use all resources from anywhere.

(2) We can use many computer resources.

(3) Improves the interaction.

(4) Reduces the load on the host computer.

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

(a)

2 | 21	2 | 5
2 | 10 - 1	2 | 2 - 1
2 | 5 - 0	1 - 0
2 | 2 - 1	
1 - 0	

$(21)_{10} = 00010101$

1's complement = 11101010.

2's complement = 11101011

$(5)_{10} = 0000\ 0101$

$(-21)_{10} + (5)_{10} = (1111\ 0000)_2$

(ii) $(-12)_{10} + (15)_{10}$.

Answer: $(0000\ 0011)_2$

35) Function Overloading:

(b)

Ability of the function to process the message or data in morethan one form.

Rules:

* It must differ in the number of its arguments or data types.

* The return type of overloaded functions are not considered for overloading same data type.

* The default arguments of overloaded functions are not considered as part of the parameter list in function overloading.

36) (a) Types of ROM:

* Read only Memory.
* Programmable Read only Memory.
* Erasable programmable Read only Memory.
* Electrically Erasable Programmable Read only Memory.

36) Difference between if-else and switch:

(b)

if-else	Switch:
* Block of statements will be executed, if the condition is true. Otherwise 'else' block will execute.	* It contains multiple Cases or choices. The User will decide the case, which is to execute.

* Syntax:
if (condition)
{
// code to be execute
}
else
{
// code to be execute.
}
	* Syntax:
	Switch (expression.
	{
	Case 1:
	// Code to be execut
	break;
	:
	Case n:
	// code to be execute
	break;
	default:
	// all the above choices are not satisfied.

* It checks both equality and logical expressions.	* It contains only a single expression. It checks only equality expression.

* It can evaluate all the types of data.

* It can evaluate either an integer or a character.

* Speed:
Speed of execution of it is slow

* Speed:
It can run the code whatever we need by using Jumping process So, It is faster than if-else statement.

3) Output device:

(a) Any hardware component that conveys the information to user is an understandable form.

Examples of output devices:

(1) Monitor
(2) Printer.
(3) Plotter.

37) Output:

(b) Constructor.

Roll no : 14.

Marks : 100.

Back to Main

Process exited after 0.07184 seconds with Return value 0

Press any key to continue . . .

38) Types of Inheritance:

(a)

* Single Inheritance.
* Multiple Inheritance.
* Multilevel Inheritance.
* Hierarichal Inheritance.
* Hybrid Inheritance.

98) Debug:

(b) Correct Program:

```
#include <iostream>
using namespace std;
class Shape
{
 private:
    int count;
 protected:
    int width, height;
 public:
    void setWidth(int w)
    {
      width = w;
    }
void setHeight(int h)
{
  height = h;
};
class Rectangle : public Shape
{
public:
 int getArea()
```

```
{
  return (width * height);
}
};
int main()
{
 Rectangle Rect;
 Rect.SetWidth(5);
 Rect.SetHeight(7);
 //Print the area of the object
 Cout << "Total area: " << Rect.getArea()
                        << endl;

 return 0;
}
```

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