

GOVT. PUBLIC EXAMINATION - 2024

COMPUTER SCIENCE

XI STD - ANSWER KEY.

PART - I.

- 1) (a) Third generation.
- 2) (d) Abstraction
- 3) (b) 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.
<ul style="list-style-type: none"> - Volatile memory - Content is lost when the power supply is switched off. - Eg. RAM. 	<ul style="list-style-type: none"> - Non-Volatile. - Content is not lost. - Eg. Hard disk, DVD ROM.

17) $(1324)_8$

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

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

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

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 function 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 separated 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()

<u>isupper()</u>	<u>toupper()</u>
<ul style="list-style-type: none"> - Use: check the given character is uppercase. - Return 1 if true otherwise 0. <p><u>General form:</u> isupper(char c)</p>	<ul style="list-style-type: none"> - 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. <p><u>General form:</u> char toupper(char c)</p>

30)

CD	DVD
<p>- <u>Full form:</u> Compact Disc.</p> <p>- <u>Capacity:</u> CD-ROM is 700 MB</p> <p>- Single-layered sides are usually silver-coloured.</p> <p>- CD data is represented as tiny indentations known as "pits".</p>	<p>- <u>Full form:</u> Digital Versatile Disc</p> <p>- <u>Capacity:</u> 4.7 GB.</p> <p>- Double-layered sides are usually gold-coloured.</p> <p>- DVD-ROM can be visually determined by noting the number of data sides of the disc.</p>

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).

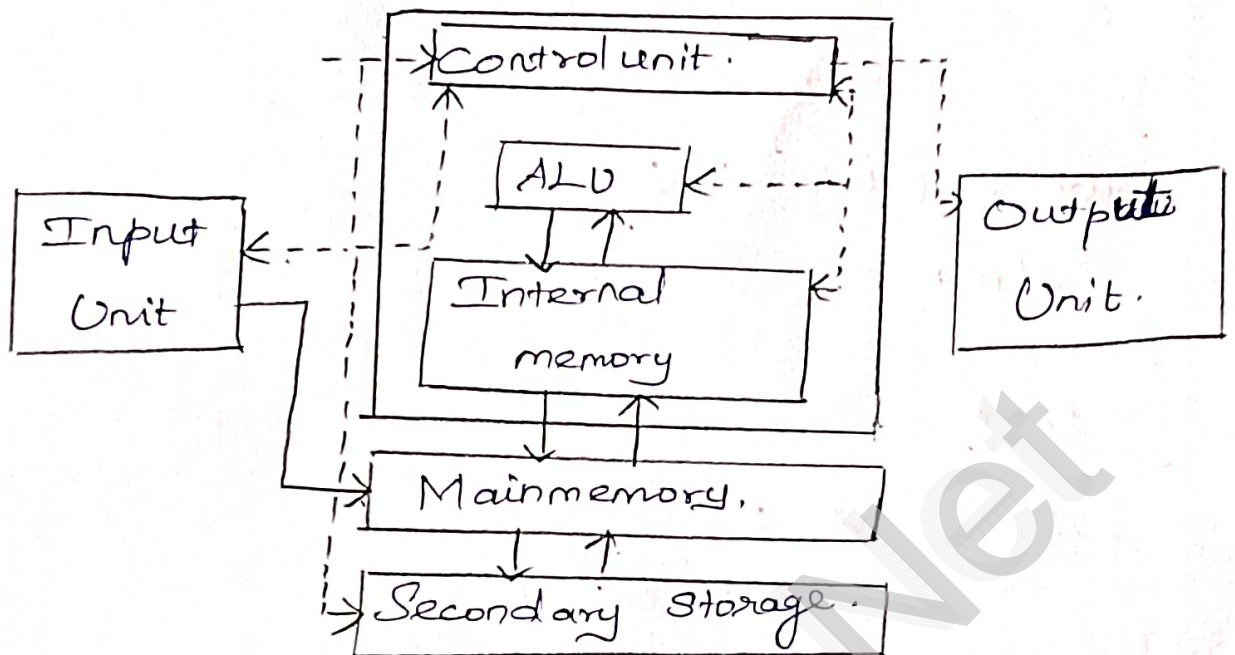
- Parts of a CPU:

- Control Unit.
- Memory Unit.
- Arithmetic & Logic Unit.

- Types of a memory:

- Primary Memory (Eg. RAM)
- Secondary Memory (Eg. DVD ROM)

diagram:



- 34) Concept of a distributed system as along .
- (b) 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)

$$\begin{array}{r} 2 \overline{) 21} \\ 2 \overline{) 10} - 1 \\ 2 \overline{) 5} - 0 \\ 2 \overline{) 2} - 1 \\ 1 - 0 \end{array}$$

$$\begin{array}{r} 2 \overline{) 5} \\ 2 \overline{) 2} - 1 \\ 1 - 0 \end{array}$$

$$(21)_{10} = 00010101$$

$$1's \text{ complement} = 11101010.$$

$$2's \text{ complement} = 11101011$$

$$(5)_{10} = 00000101$$

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

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

$$\text{Answer: } (00000011)_2$$

35) Function Overloading:

(b)

Ability of the function to process the message or data in more than 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.

26) Types of ROM:

(a)

* 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

* Block of statements will be executed, if the condition is true. Otherwise 'else' block will execute.

* Syntax

```
if (condition)
{
    // code to be execute
}
else
{
    // code to be execute.
}
```

* It checks both equality and logical expressions.

Switch.

* It contains multiple cases or choices. The user will decide the case, which is to execute.

* Syntax:

switch (expression).

Case 1:

// code to be execute

break;

:

Case n:

// code to be executed

break;

default:

// all ^{the above} choices are not satisfied.

* 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.

37) 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.

* Hierarchical Inheritance.

* Hybrid Inheritance.

38) 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
```

```
{
```

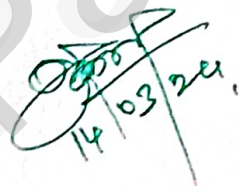
```
public:
```

```
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;
}
```


14/03/24.

P. REVATHY

P. G. Teacher

(Computer science /

Computer Application)

Muthuthayar Mukkulathore

Hr. Sec School,

Thirunagar,

Madurai.