

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.

16) Distinguish Primary and Secondary Memory.

Primary Memory	Secondary Memory.
<ul style="list-style-type: none"> <li>- Volatile memory</li> <li>- Content is lost when the power supply is switched off.</li> <li>- Eg. RAM.</li> </ul>	<ul style="list-style-type: none"> <li>- Non-Volatile.</li> <li>- Content is not lost.</li> <li>- Eg. Hard disk, DVD ROM.</li> </ul>

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

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()

isupper()	toupper()
<ul style="list-style-type: none"> <li>- Use: check the given character is uppercase.</li> <li>- Return 1 if true otherwise 0.</li> </ul> <p><u>General form:</u> isupper(char c)</p>	<ul style="list-style-type: none"> <li>- Use: Convert the given character into its uppercase.</li> <li>- Return the upper case equivalent of the given character.</li> <li>- If the given character itself is in uppercase the output will be the same.</li> </ul> <p><u>General form:</u> char toupper(char c)</p>

30)

CD

DVD,

- Full form:  
Compact 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 GB.
- Double-layered sides are usually gold-coloured.
- DVD-ROM can be visually determined by noting the number of data sides of the 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
```

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```

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 OS along with its use.
- (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.

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

(a)

$$\begin{array}{r} 2 \overline{) 21} \\ 2 \overline{) 10} - 1 \\ 2 \overline{) 5} - 0 \\ 2 \overline{) 2} - 1 \\ 1 - 0. \end{array} \quad \begin{array}{l} 00010101. \\ \text{1's complement} \rightarrow 11101010 \\ \text{2's complement} \rightarrow 11101011 \end{array}$$

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

Answer  $(16)_{10}$ .  $\rightarrow$  Ans: 00010000//

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

$$12 \rightarrow 00001100$$

$$15 \rightarrow 00001111$$

$$(15)_{10} - (12)_{10} \rightarrow 00000011.$$

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

36) 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 <sup>the above</sup> 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:
```

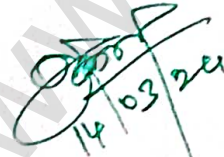
```
int getArea()
```



```
{
    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

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