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COMMON HALF YEARLY EXAMINATION - 2024

Standard - XI

COMPUTER SCIENCE

Reg.No.

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Marks: 70

Time: 3.00 hrs.

PART - I

I. Choose the correct answer:

15×1=15

- Which one of the following is the main memory?
 - ROM
 - RAM
 - Flash drive
 - Hard disk
- The range of ASCII values for lower case alphabets is from
 - 97 to 122
 - 65 to 90
 - 0 and 127
 - 1 to 26
- How many bits constitute a word?
 - 8
 - 16
 - 32
 - d) determined by the processor used
- Which key brings the focus on the first menu of the menu bar?
 - F1
 - F2
 - F9
 - F10
- Ensuring the input -output relation is
 - the responsibility of the algorithm and the right of the user.
 - the responsibility of the user and the right of the algorithm.
 - the responsibility of the algorithm but not the right of the user.
 - the responsibility of both the user and the algorithm.
- Suppose $u, v = 5, 10$ before the assignment .What are the values of U and V after the sequence of assignments?
 - $u_i = v$
 - $v_i = u$
 - $u, v = 5, 5$
 - $u, v = 10, 5$
 - $u, v = 5, 10$
 - $u, v = 10, 10$
- Who coined the phrase " structured programming"?
 - E.W. Dijkstra
 - Rick Mascitti
 - Bjarne Stroustrup
 - Blaise Pascal
- Which of the following operator is insertion operator in C++?
 - >>
 - <<
 - <>
 - ^^
- The set of statements that are executed again and again in iteration is called as
 - condition
 - loop
 - statement
 - body of loop
- When accessing a structure member, the identifier to the right of the dot operator is the name of
 - structure variable
 - structure tag
 - structure member
 - structure function
- Which of the following is the most important advantage of inheritance?
 - data hiding
 - code reusability
 - code modification
 - accessibility
- Which of the following access specifier protects data from inadvertent modifications?
 - private
 - protected
 - public
 - global

13. The definition of the overloaded operator is given using the keyword
 a) class b) size of c) operator d) overload
14. Which of the following derives a class student from the base class school?
 a) school:student b) class student : public school
 c) student : public school d) class school : public student
15. Which of the following is not a malicious program on computer systems?
 a) worms b) Trojans c) spyware d) cookies

PART - II

II. Answer any 6 questions. Question No.24 is compulsory. 6×2=12

16. Write the functions of control unit.
17. What are derived gates?
18. Draw a flowchart for conditional statement.
19. Define a loop invarriant.
20. Assume $n = 10$; what will be result of $n++$ and $--n$;
21. Write a note on Local Scope.
22. Write down the importance of destructor.
23. What is function overloading?
24. Convert $(9324)_{10}$ to octal.

$4^{10340} (110)$

PART - III

III. Answer any 6 questions. Question No.33 is compulsory. 6×3=18

25. Differentiate PROM and EPROM.
26. Write the two ways to create a new folder.
27. What is abstraction?
28. Write the syntax and purpose of switch statement.
29. Write note an Array of strings.
30. List some of the features of modular programming.
31. What is the difference between polymorphism and inheritance though are used for reusability of code?
32. Write about encryption and decryption.
33. Write the output of the following program.

```
#include<iostream>
using namespace std;
class A
{protected:
int x;
public:
void show()
```

The unchanged val.
C++ implement of key execution of
show console loop body
One dimension

```

{cout<<"x="<<x<<endl;}
A()
{cout<<endl<<"I am class A "<<endl;}
~A()
{cout<<endl<<"Bye";} };
class B : public A
{protected:
int y;
public:
B(int x1, inty1)
{x = x1;
y = y1; }
B()
{cout<<endl<<" I am class B "<<endl;}
~B()
{cout<<endl<<"Bye";}
void show ()
{cout <<"x = "<<x<<endl;
cout<<"y = "<<y<<endl;}};
int main()
{A objA;
B objB(30, 20);
objB.show();
return 0;}

```

PART - IV

IV. Answer in detail :

5×5=25

34. a) Explain the following

- a) Inkjet Printer b) Multimedia projector c) Bar code/QR code Reader

(OR)

b) Explain the fundamental gates with expression and truth table.

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

(OR)

b) Explain Building Blocks of Algorithms.

36. a) What is an entry control loop? Explain any one of the entry controlled loop with suitable example.

(OR)

- b) Write a program to accept any integer number and reverse it.
37. a) Write the differences between Object Oriented Programming and procedural programming.

(OR)

- b) Write the output of the following.

```
#include<iostream>
using namespace std;
class student
{
int rno, marks;
public:
student(int r, int m)
{cout<<"welcome" <<endl;
mo=r;
marks=m;
}
void printdet()
{
marks = marks + 25;
cout<<"Name:Bharathi"<<endl;
cout<<"Roll no:"<<mo<<"\n";
cout<<"Marks:"<<marks<<endl;
}
};
int main()
{
student s(10,75);
s.printdet();
cout<<"Bye";
return 0;
}
```

38. a) Explain the different types of inheritance.

(OR)

- b) Write the different types of cyber - attack.