GOVT PRACTICAL EXAMINATION – 2024-2025

NAME :

REG.NO :

STD :

SUBJECT :

DATE :

SESSION :

BATCH :

QUESTION - 1

Program: 1

Write a C++ program to input basic salary of an employee and calculate its Gross salary according to following

Basic Salary <25000 : HRA = 20%, DA = 80%
Basic Salary >= 25000 : HRA = 25%, DA = 90%
Basic Salary >= 40000 : HRA = 30%, DA = 95%

AIM:

To Write a C++ program to input basic salary of an employee and calculate its Gross salary.

CODING:

```
#include <iostream>
using namespace std;
int main()
{
float basic, gross, da,hra;
cout<<"Enter basic salary of an employee: ";
cin>>basic;
if (basic <25000)
{
da = basic *80/100;
hra= basic *20/100;
}
else if (basic >=25000 && basic<40000)
{
da = basic *90/100;
hra= basic *25/100;
}
else if (basic>=40000)
{
da = basic *95/100;
hra= basic *30/100;
}
gross= basic +hra+ da;
cout<< "\n\t Basic Pay ....."<< basic<<endl;
cout<< "\t Dearness Allowance ....." << da <<endl;
cout<< "\t House Rent Allowance....."<< hra <<endl;
cout<< "\t ----------"<<endl;
cout<< "\t Gross Salary....."<<gross <<endl;
cout<< "\t ----------"<<endl;
return 0;
}
```

OUTPUT:

```
Enter the Basic Pay of an Employee:        25000
Basic pay                 :        25000
Dearness Allowance        :        22500
House Rent Allowance      :         6250
                           ----------
Gross Salary                       53750
                           ----------
```

RESULT:

❖ Thus the C++ program to gross salary has been done and the output is verified.

[OR] Program: 6 [INSERT / DELETE ELEMENTS IN AN ARRAY]

QUESTION - 2

Program: 2

Write a C++ program to check percentage of a student and display the division (distinction, first, second, third or fail) scored using switch case

Percentage	Division
>=80	Distinction
>=60 and <80	First division
>=50 and <60	Second Division
>=40 and <50	Third Division
<40	Fail

AIM:

❖ To write a C++ program to check percentage of a student and display the division using switch case

CODING:

```
#include <iostream>
using namespace std;
int main()
{
float percent;
int x;
cout<<"Enter your percentage: ";
cin>>percent;
cout<<"You scored "<<percent<<"%"<<endl;
x = percent/10;
switch (x)
{
case 10:
case 9:
case 8:
cout<<"You have passed with Distinction";
break;
case 7:
case 6:
cout<<"You have passed with First division";
break;
case 5:
cout<<"You have passed with Second division";
break;
case 4:
cout<<"You have passed with Third division";
break;
default:
cout<<"Sorry: You have failed";
}
return 0;
}
```

Output 1

```
Enter your percentage: 79
You scored 79%
You have passed with First division
```

Output 2

```
Enter your percentage: 39
You scored 39%
Sorry: You have failed
```

RESULT:

❖ Thus the C++ program to check percentage student has been done and the output is verified.

[OR] Program: 7 [BOUNDARY ELEMENTS OF A MATRIX]

QUESTION - 3

Program: 3

Write a C++ program to enter any number and check whether the number is palindrome or not using while loop.

AIM:

❖ To write a C++ program to enter any number and check whether the number is palindrome or not using while loop.

CODING:

```
#include <iostream>
using namespace std;
int main()
{
int n,num, digit, rev =0;
cout<<"Enter a positive number: ";
cin>>num;
n =num;
while (num)
{
digit=num%10;
rev=(rev *10)+ digit;
num=num/10;
}
cout<<" The reverse of the number is: "<< rev <<endl;
if (n == rev)
cout<<" The number is a palindrome";
else
cout<<" The number is not a palindrome";
return 0;
}
```

Output 1

Enter a positive number to reverse: 1234
The reverse of the number is: 4321
The number is not a palindrome

Output 2

Enter a positive number to reverse: 1221
The reverse of the number is: 1221
The number is a palindrome

RESULT:

❖ Thus the C++ program to palindrome or not has been done and the output is verified.

[OR]

Program: 8 [ABC PUBLISHERS]

QUESTION - 4

Program: 4

Using do while loop create the following menu based C++ program.

1.Convert a Decimal to binary number
2.Convert a binary number to Decimal
3. Exit
Depending on the choice accept the value and display the result.
The program should continue till the user select the third option

AIM:

❖ To write a C++ program Convert a Decimal to binary number & binary to Decimal using do-while loop.

Coding:

```
#include <iostream>
#include <cmath>
using namespace std;
int main()
{
int dec,d,i,temp,ch;
long int bin;
do
{
     dec=bin=d=i=0;
     cout<<"\n\n\t\tMENU\n1. Decimal to Binary number\n2.Binary to Decimal number\n3.Exit\n";
     cout <<"Enter your choice(1/2/3)";
     cin>>ch;
switch (ch)
{
       case 1: cout << "Enter a decimal number: ";
       cin >> dec;
       temp=dec;
while (dec!=0)
{
      d = dec%2;
      bin += d * pow(10,i);
      dec /= 2;
      i++;
}
     cout << temp << " in decimal = " << bin << " in binary" << endl ;
     break;
     case 2: cout << "Enter a binary number: ";
     cin >> bin;
     temp=bin;
while (bin!=0)
{
   d = bin%10;
   dec += d*pow(2,i);
   bin /= 10;
   i++;
}
    cout << temp << " in binary = " <<dec << " in decimal";
    break;
    case 3:
    break;
```

```
    default : cout<<"Invalid choice";
    }
}
   while (ch!=3);
   return 0;
}
```

OUTPUT 1:

MENU
1. Decimal toBinary number
2.Binary to Decimal number
3.Exit Enter your choice(1/2/3) 1
Enter a decimal number: 23
23 in decimal = 10111 in binary

MENU
1. Decimal to Binary number
2.Binary to Decimal number
3.Exit Enter your choice(1/2/3)2
Enter a binary number: 11001
11001 in binary = 25 in decimal

MENU
1. Decimal to Binary number
2.Binary to Decimal number
3.Exit Enter your choice(1/2/3)3

OUTPUT 2 :

MENU
1. Decimal to Binary number
2.Binary to Decimal number
3.Exit
Enter your choice(1/2/3)
4 Invalid choice
MENU
1. Decimal to Binary number
2.Binary to Decimal number
3.Exit
Enter your choice(1/2/3)

RESULT:

- Thus the C++ program to decimal to binary & binary to decimal has been done and the output is verified.

[OR]

Program: 9 [EMPLOYEE DETAILS USING CLASS]

QUESTION - 5

Program: 5

Write a C++ program using a user defined function to generate the Fibonacci series till n terms and print if each term is prime or Composite.

AIM:

- To write a C++ program using a user defined function to generate the Fibonacci series till n terms and print if each term is prime or Composite.

CODING:

```
#include <iostream>
#include <stdlib.h>
using namespace std;
void Primechk (int a )
{
int j;
if ( a == 0 || a == 1 )
{
cout<< " NEITHER PRIME NOR COMPOSITE ";
}
else
{
for (j = 2 ; j<a; j++)
{
if (a%j==0)
{
 cout<< "\tCOMPOSITE" ;
break ;
}
}
if ( a==j )
cout<< "\tPRIME" ;
}
}
void fibo ( int n )
{
int a = -1 , b = 1 ,c=0 ;
for ( int i = 1 ; i <= n ; i++)
{
cout<<endl;
c = a + b ;
cout<<c;
Primechk(c);
a = b;
b = c ;
}
}
int main ()
{
int n ;
cout << " ENTER THE NUMBER OF REQUIRED FIBO TERMS " ;
cin >> n ;
cout<< "\n\tFIBONACCI SERIES\n " ;
fibo (n) ;
return 0;
}
```

OUTPUT:

```
ENTER THE NUMBER OF TERMS 10
      FIBONACCI SERIES
0    NEITHER PRIME NOR COMPOSITE
1    NEITHER PRIME NOR COMPOSITE
1    NEITHER PRIME NOR COMPOSITE
2    PRIME
3    PRIME
5    PRIME
8    COMPOSITE
13   PRIME
21   COMPOSITE
34   COMPOSITE
```

RESULT:

❖ Thus the C++ program to Fibonacci series has been done and the output is verified.

[OR]

Program: 10 [STUDENT DETAILS]