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UNIT TEST – SEPT- 2015

CLASS: XI

MARK:40

TIME:1.30 hrs

1. What is the difference b/w “if-else” & “Switch case” ? 2
2. What are data types? What are all predefined data types in c++? 4
3. What will be the size of following constants? 2
‘v’,123,’1’,12.4500
4. Write the corresponding C++ expressions for the following mathematical expressions: 2
i) $\sqrt{a^2+b^2+c^2}$ (ii) $p+q/(r+s)^{10}$
5. Evaluate the following, where a, b, c are integers and d, f are floating point numbers. 2
The value of a=8, b=4 and d=2.5
(i) $f = a * b + a/b$
(ii) $c = d+a + b \% a$
6. What is the output of the following? 2
i)

```
#include<iostream.h>
void main ( )
{
    int ch=20;
    cout << ++ch << "\n" << ch << "\n";
}
```

 - 1) What output does the above code fragment produce?
 - 2) What is the effect of replacing ++ch with ch+1?
- ii)

```
#include<iostream.h>
void main( )
{
    a=3;
    a=a+1;
    if (a>5)
        cout<<a;
    else
        cout<<(a+5);
}
```

2
- iii) What will be the output of the following program segment? 2
If input is as: (a) c (b) m (c) a (d) v

```
cin >>ch;
switch (ch)
{ case 'c': cout<<"Computer Science";
  case 'm': cout<<"Mathematics";
    break;
  case 'a': cout<<"Accountant";
    break;
  default: cout<<" wrong choice";
}
```
- iv) Rewrite the following using if else: 2

```
char code;
cin>> code;
switch(code)
{
case 'A' : cout<<"Grade A";
case 'B' : cout<<"Grade B";
case 'C' : cout<<"Grade C";
break;
```

```

case 'D' : cout<<"Grade D";
default:
cout<<"Grade F";
}

```

v) What output will be the following code fragment produce? 2

```

void main( )
{
    int val, res, n=1000;
    cin>>val;
    res = n+val >1750 ? 400:200;
    cout<<res;
}

```

(i) if val=2000 (ii) if val=1000 (iii) if val=500

7. What is the difference between semantics error and syntax error? Give an example of each. 3

8. Find the error from the following code segment and rewrite the corrected code underlining the correction made. 2

```

#include(iostream.h)
void mains ( )
int X,Y;
cin>>X;
cout>>y;
if x= =y
    cout<<Y+X;
else
    cout>>Y; }

```

9. Convert the following code segment into switch case construct. 2

```

int ch;
cin>>ch;
If(ch = = 1)
{ cout<<" Laptop";
}
else If(ch = = 2)
{
    cout<<"Desktop ";
} else if(ch= = 3)
{
    cout<<"Notebook";
} else
{
    cout<<"Invalid Choice";
}
}}

```

10. Which header files are required for the following? 2

(i) cin (ii) sqrt() (iii) exit(0) (iv) cout

11. Write a C++ program to check a year for leap year or not. 4

12. Write a C++ program to print day of the week corresponding to the number (1-7) entered using switch case statement. 4

13. Evaluate $x = -y + 2y$ if $y = 3$ 1

ANSWER KEY

1. General syntax of each – 1mark, Explanation-1mark
2. Classification-1 ½ int,char,float,double,void-2 ½
3. ½ mark each- 'v'- ½ word,123- 1 word,'1'- ½ word,12.4500-2 words
4. 1 mark each
 - i) $\sqrt{a^2+b^2+c^2}$ -sqrt(a*a+b*b+c*c) (ii) $p+q/(r+s)^{10}$ - p+q/pow((r+s),10)
5. 1 mark each
 - (iii) $f = a * b + a/b \rightarrow 34.0$
 - (iv) $c = d+a + b \% a \rightarrow 14$
5. 1 mark each for the correct output
 - 3) 21
21
 - 4) 21
20

ii) 9

iii) ½ mark each(a) c- Computer Science(b) m- Mathematics(c) a - Accountant(d) v- wrong choice

iv) if-else-if correct construct 2 marks

```
cin>> code;
if(code=='A')
    cout<<"Grade A";
else if(code=='B')
    cout<<"Grade B";
else if(code=='C')
    cout<<"Grade C";
else if(code=='D')
    cout<<"Grade D";
else
    cout<<"Grade F";
```

v) (i) if val=2000 - 400 (ii) if val=1000 -400 (iii) if val=500 - 200

7. Definition-1, Explanation- 1, Examples - 1

8. # include<iostream.h>

#include<conio.h>

void main()

```
{
    int X,Y;
    cin>>X;
    cout>>Y;
    if (X==Y)
        cout<<Y+X;
    else
        cout>>Y;
}
```

9.

```
int ch;
cin>>ch;
switch(ch)
{ case 1:
    Cout<<"Laptop";
    Break;
case 2:
    cout<<"Desktop ";
    break;
case 3:
    cout<<"Notebook";
```

```

break;
default:
cout<<"Invalid Choice";
}

```

10. (i)cin –istream.h (ii) sqrt()-math.h (iii) exit(0)-process.h (iv) cout()-ostream.h

```

11. #include<iostream.h>
void main()
{
int year;
cin>>year;
if(year%100==0)
{if(year%400==0)
cout<<"it is a leap year";
}
else if(year%4==0)
cout<<"Leap year";
else
cout<<"Not a leap year";
}
}

```

4

12. #include<iostream.h>

```

void main()
{
int c;
cin>>c;
switch(c)
{ case 1:
Cout<<"Sunday";
Break;
case 2:
cout<<"Monday ";
break;
case 3:
cout<<"Tuesday";
break;
case 4:
cout<<"Wednesday ";
break;
case 5:
cout<<"Thursday ";
break;
case 6:
cout<<"Friday ";
break;
case7:
cout<<"Saturday ";
break;
default:
cout<<"Invalid Choice";
}
}
}

```

4

13. Evaluate $x = -y + 2y$ if $y = 3$
 $x = 2 + 2 * 2 = 6$

1