

Guru Gobind Singh Public School

Sector : V/B, Bokaro Steel City

1. What is the difference between Hardware, Software and Firmware ?
2. Distinguish between internal and external memory.
3. What is system software ? What role does it play in the functioning of the computer ?
4. How is java platform independent ?
5. What is meant by implicit and explicit type conversion ? Explain with example.
6. What do you understand by Entry and Exit controlled loop ? Explain with suitable example.

7. Convert it .

a) $(1000111)_2 = (?)_8$

b) $(436)_8 = (?)_{16}$

c) $(10111)_{10} = (?)_{16}$

8. Solve it.(Using Binary)

a) $1001101 + 110011$

b) $11000001 - 111111$

9. Write the output of the following code

```
a) int var1=10, var2=20;
for (int i=1; i<=2; i++)
{
System.out.print(var1++ +"\t" + --var2 +"\n");
System.out.print(var2-- +"\t" + ++var1 +"\n");
}
```

b.) Rewrite the following code using switch

```
if(ch=="E")
Eastern++;
if(ch=="W")
Western++;
if(ch=="N")
Northern++;
if(ch=="S")
Southern++;
else
Unknown++;
```

c.) How many times are the following loop executed?

```
int num=5;
```

```
do
```

```
{
```

```
System.out.println(num+1);
num--;
} while (num !=0);
```

d.) Rewrite the following code using IF statement without effecting the output of the code:

```
int a=1;
switch (a)
{
case 1:
System.out.print("Sunday");
break;
case 6:
System.out.print("WeekDay");
break;
case 7:
System.out.print("Nearing Weekend");
break;
default : System.out.print("Wrong Number");
}
```

e.) Write the correct program after removing error(s) (if any) and underline the correction

```
int i=0;x=0;
while ( i < 10 )
{
if (i % 2 = 0)
{
x == x + i ;
System.out.print(x + 1);
}
i ++;
}
```

f.) Change the following code using For loop without effecting the output:

```
int j=1,s=0;
while ( j < 10 ) {
System.out.print(j);
s = s + j;
j + =3;
}
System.out.print(s);
```

g.) Find the output of the following code:

```
double Number = 7583241;
int Firsr = 0, Second = 0, R;
```

```

do
{
R = Number % 10;
if ( R % 2 == 0 )
First += R;
else
Second += R;
Number = Number / 10;
} while (Number > 0);
System.out.print(First - Second );

```

h.) Re-write the correct program after removing errors, if any, and underline the corrections made.

```

char ch="A";
for(i=1;i<=2;i++)
{
switch(ch)
{
case "A" || "B" : System.out.println ("OK");break;
}
}

```

i.) Rewrite the following program using switch case statement :-

```

private void jButton1ActionPerformed()
{ int inputnum=8,calcval=0;
if(inputnum= =5)
{
calcval=inputnum*25-20;
System.out.println(inputnum+calcval);
}
else if(inputnum= =10 || inputnum = =15)
{
calcval=inputnum*25-20;
System.out.println(calcval- inputnum);
}
else
System.out.println(calcval);
}

```

j.) Give the output of the following program:-

```

private void jButton1ActionPerformed()
{
int x=0,y=1,,z=0;
for(int a=1;a<=7;a++)
{ z=x+y;

```

```
System.out.print(z + ",");
x=y;
y=z;
}
}
```

k.)

Rewrite the following program code using switch statement:

```
if (d == 1)
day = "Monday";
else if (d == 2)
day = "Tuesday";
else if (d == 3)
day = "Wednesday";
else if(d<1)
day = "Invalid";
```

L.) Give the output of the following programs:-

```
i) int a=6,b=9,c=10;
c = ++a + b++ + ++c;
System.out.print(a + "," + b + "," + c);
```

10. Write a program in Java to

- a) Accept a character and check whether it is vowel or not.
- b) To input a year and check whether it is leap year or not.
- c) To input a no and check whether it is palindrome or not.

Example : 12521 is a palindrome no.

253 is not a palindrome no.

- d) Input a number and check whether it is prime or not.
- e) Input a number and display its factorial.
- f) Write a program to display series like 1 2 4 8 16 32
- g) Write a program to display the sum of given series

$S=1-2+3-4+5-6+\dots+n.$

- h) Input 10 number and display the sum of
 - a) All positive values entered
 - b) All negative values entered
 - c) All Even values entered
 - d) All Odd values entered