

**INTERNATIONAL INDIAN SCHOOL, DAMMAM**  
**SECOND TERMINAL EXAMINATION, NOVEMBER 2014**

**SUBJECT: COMPUTER SCIENCE**  
**CLASS: XI**

**TIME: 3 HRS**  
**MAX.MARK: 70**

**SET A**

1. What is the difference between a keyword and an identifier? 2
2. What is the purpose of a header file in a program? 1
3. What are the advantages of floating point numbers over integers? 2  
Answer with suitable examples?
4. What is a variable? What are the two values associated with a variable? 2
5. What do you mean by type promotion? 1
6. What will be the output of the following program segment?

(a) #include<iostream.h> 2  
void main()  
{  
int X[ ] = {60, 50, 30, 40} , y, count = 4, i;  
y=3;  
for(i=count - 1; i>0; i--)  
switch(i)  
{  
case 0:  
case 1:cout<< y\*X[i];  
case 2:  
case 3: cout<< y+X[i]<<endl;  
}}  
}

(b) void main() 3  
{  
int i,x;  
for(i=2;i<10;i\*=2)  
{  
for(x=0;x<2;x++)  
cout<<x\*i;  
cout<<"\n";  
}}  
}

(c) void main()

2

```
{
    int x[]={2,4,6,8,10};
    int j=5,k;
    for(k=4;k>0;k--,j++)
    {
        x[k]=x[k-1]+j;
        cout<<x[k]<<" ";
    }
}
```

7. What is the difference between unary and binary operators? Give suitable examples. 2

8. What is "fall through"? What is the significance of default clause in switch statement? 2

9. Write an equivalent for loop for the following while loop: 2

```
int x=0,z;
while(x<=100)
{ z=x+3;
  cout<<" the value of z is \n"<<z;
  x+=2;
}
```

10. Rewrite the following code after removing the syntax error(s) if any. Underline each correction.

a) #include<iostream.h> 2

```
void main()
int MIN[ ], i ;
i=0;
do{
cin>>MIN[i];
if((MIN[i]>0) & (MIN[i]%5= =0))
  cout<<Min[i]; i++;
}while(i<5) }
```

b) `#include<iostream.h>` 2  
`void main[]`  
`{`  
`int value,sum=inct=0;`  
`int i;`  
`for (i= 0;i<=10;i++)`  
`{`  
`cin>>value;`  
`sum +=value;`  
`inct++;`  
`}`  
`cout<<"the average is<<setw(5)<<sum/inct;`  
`}`

11. Differentiate between entry controlled and exit controlled loop with suitable example? 3

12. How many times is the following loop executed? 1  
`int n=7;`  
`while(n!=2)`  
`{`  
`cout<<"check this";`  
`n -=2;`  
`}`

13. Construct C++ expression to represent the following conditions: 2  
 (i) *grade* is 'B' and *exper* is more than 3 years  
 (ii) Either *age* is in the range 50-60 or *members* are more than or equal to 8

14. Rewrite the following code segment using **if-else statement**: 2  
`int salary,age;`  
`cin>>age;`  
`salary =((age>35)?6000:(age>28)?4800:3000);`  
`cout<<salary;`

15. Evaluate the following C++ expression:  $a=2, b=4, c=5, d= -1$  2  
 (i)  $a > b \ \&\& \ b < c \ || \ c < !d + 3$   
 (ii)  $a * c + 3 \% b - c / 2$

16. Write the equivalent C++ expression for the following expressions: 2  
 (i)  $ut + \frac{1}{2}ft^2$   
 (ii)  $\sqrt{9xy^3}$

17. Consider the following array: 2  
`int X[5][50];`  
`float Z[18];`
- (i) Find the number of elements in each array  
(ii) Find the total number of bytes required to store each array
18. What is an array? What is the purpose of the index or subscript? 2
19. Write the order of evaluation in the following expression: 1  
(i) `c<3 || b>3 && d>a`  
(ii) `i+5>=j-6*k`
20. State why the following expressions are invalid. How would you correct them? 1  
(i) `income>=2500 && <5000`  
(ii) `int cube[][]={1,1,2,8};`
21. Element *find*[5] is which element of the array? 1
22. Write C++ program for the following:
- (a) To find the sum of squares of all the elements on the main diagonal of a given matrix. 4
- (b) To check if the given number is a palindrome or not. 3
- (c) To find the smallest and second smallest element in a given 1 D array. 4
- (d) To print the following pattern: 3  
1  
2 2  
3 3 3  
4 4 4 4
- (e) To read and check the equality of two matrices. 4
- (f) To find the sum of the following series: 4  
 $1 + \frac{1}{2!} + \frac{1}{3!} + \frac{1}{4!} + \dots \dots \dots N \text{ terms}$
- (g) To SWAP the elements of every even location with its following odd location in a given 1D array. 4  
**Example:** If an array of six elements initially contain elements as  

2	4	8	7	6	9
---	---	---	---	---	---

  
Then the program should rearrange the array as  

4	2	7	8	9	6
---	---	---	---	---	---