

GULF SAHODAYA EXAMINATION(SAUDI CHAPTER) – 2016

COMPUTER SCIENCE

Class : XI

Max. Marks : 70

Time : 3 Hours

Instructions:

1. All questions are compulsory.
2. Programming must be done in C++.

Questions:

1. What is the difference between data and information? 1
2. Name any four types of operating systems. 1
3. Why primary memory is termed as 'destructive write' memory but 'non-destructive read' memory? 2
4. Convert: (i) $A2E_{16}$ to decimal 2
(ii) 472_8 to binary
5. Expand and explain RISC computers. 2
6. What is a port? Name two wired ports and two wireless ports. 2
7. What is the role of indentation in a program? 1
8. What is a prologue? 1
9. What is the difference between testing and debugging? 2
10. Define: (i) Echo printing 2
(ii) Robustness
11. Write any four uses of documentation. 2
12. What are the different stages of program development process? 2
13. Explain compile-time errors with example. 2
14. What is meant by token? 1
15. What are header files? 1
16. Classify the following identifiers of C++ into valid and invalid category. 2
(i) `1num` (ii) `num+1` (iii) `num` (iv) `num1num`

17. Convert the following equations to C++ statements. 2

(i) $s = 1 + \frac{1}{x} + \frac{1}{x^2} + \frac{1}{x^3}$ (ii) $a = \pi r^2$

18. What is meant by type casting? Give an example. 2

19. Write the output of the following code fragment: 1

```
int a=5, b=7;
a+2 <= b? cout<<a++ : cout<< b--;
```

20. What is the result of the following expression? 1

!((a<b) && (b==c) || (c>=a)) if a=5, b=7 and c=5

21. Rewrite the following program after correcting the errors. 2

Underline each correction.

```
#include<iostream.h>
void main( )
{ int a=10;
  do;
  a=-2;
  cout<<a;
}while a>=2
}
```

22. Rewrite the following code using switch statement. 2

```
char code;
cin>>code;
if(code=='R')
  cout<<"Rs. 4";
else if(code=='W' || code=='G')
  cout<<"Rs. 10";
else cout<<"Rs. 12";
```

23. Name the header file(s) needed for the execution of the following C++ code. 1

```
void main( )
{ char name[40];
  strcpy(name,"India");
  puts(name); }
```

24. Write the output for the following statements: 2

(i) `x=sqrt(49);`
(ii) `y=strlen("Save Earth");`
(iii) `tolower("Happy HOLI");`
(iv) `w=abs(-5);`

25. Differentiate between actual parameter and formal parameter. 2
Give an example in C++ to illustrate both type of parameters.

26. How many bytes are required by the following array for its storage? 1
float A[6][7];

27. Find the output of the following program: 2

```
#include<iostream.h>
#include<ctype.h>
void main( )
{   char Text[ ] = "Aim High!";
    for(int l=0; Text[l]!='\0';l++)
    { if(!isalpha(Text[l]))
      Text[l]='*';
      else if(isupper(Text[l]))
      Text[l]=Text[l]+1;
      else
      Text[l] = Text[l+1]; }
    cout<<Text; }
```

28. For the following C++ program, select the possible output(s) from the options (i) to (iv) given below: 2

```
#include<stdlib.h>
#include<iostream.h>
void main()
{   randomize();
    char P[ ]="EXCELLENT";
    for(int l=0; P[l] != 'L'; l++)
    {   int L=random(2)+l;
        cout<<P[L]<<"-";
    }
}
```

(i) E-C-C-L- (ii) X-E-E-N- (iii) X-X-E-E- (iv) L-T-L-T-

29. Find the output of the following programs: 2

```
#include<iostream.h>
void result(int &x, int y=10)
{   int temp = x + y;
    x += temp;
    if(y <=10)
    y += temp; }
```

```

void main( )
{   int A1=10, B2=5;
    result(A1, B2);
    cout<<A1<<'\t'<<B2<<endl;
    result(A1);
    cout<<A1<<'\t'<<B2<<endl;
}

```

30. Find the output of the following program:

```

#include<iostream.h>
struct number
{
    int no1, no2; };
void display(number n)
{
    cout<<"Number1="<<n.no1++<<"Number2="<<-n.no2<<endl; }
void main( )
{   number n1={10,100}, n2, n3;
    n3 = n1;
    n1.no1 += 5;
    n2 = n3;
    n2.no1 -= 5;
    n2.no2 *= 2;
    n3.no1 += 1;
    display(n1);
    display(n2);
    display(n3); }

```

3

31. Write a program to check whether a number is prime or not.

4

32. Write a program using nested loops to produce the following pattern.

3

```

A
A B
A B C
A B C D

```

33. Write a program to count the number of vowels in a string.

4

34. Write a complete program that reads an integer array having 10 elements.

4

The program uses a function reverse() to reverse the array.

35. Write a program to find the sum of elements along the left diagonal and right diagonal of a matrix.

4