

INTERNATIONAL INDIAN SCHOOL-DAMMAM
FIRST TERM EXAM 2014
COMPUTER SCIENCE (083)

CLASS:XI

SET- A

MAX. MARKS:70
TIME: 3 HRS

Note: i. All questions are compulsory
ii. Use programming language C++

- | | |
|---|---|
| 1.(a) Name any two first generation computers. | 1 |
| (b) Give 2 examples of General Purpose application software. | 1 |
| (c) How many Mega bytes are there in 1 Zetta Byte | 1 |
| (d) What is the function of memory ? What are its measuring units? | 2 |
| (e) What is the difference between a microprocessor and a micro computer? | 2 |
| (f) What is open source software? Give 2 examples. | 2 |
| (g) What is scheduling ? What are the two scheduling techniques? | 2 |
| (h) What is the difference between static RAM and Dynamic RAM | 2 |
| (i) What is a port ? Define Fire wire port. | 2 |
| (j) Convert | 5 |
| 1. $(2DC4)_{16}$ to $()_8$ | |
| 2. $(100101.101)_2$ to $()_{10}$ | |
| 3. $(145.03)_8$ to $()_{10}$ | |
| 4. $(423)_{10}$ to $()_{16}$ | |
| 5. $(63.362)_8$ to $()_2$ | |
| 2.(a) What are identifiers in C++? What is the identifier forming rule in C++? | 2 |
| (b) What are non graphic characters? How are non graphic characters represented in C++? | 2 |
| (c) In how many ways can a variable declared in C++? Give example. | 2 |
| (d) What do you mean by type casting? What is type cast operator? | 2 |
| (e) Differentiate between while loop and do while loop with example. | 2 |
| 3.(a) Write an equivalent C++ expression | 2 |

- i)
$$\frac{-b - \sqrt{b^2 - 4ac}}{2a}$$
 ii) $(a+b)^2 / (c+d)^4$
- (b) Construct logical expressions to represent the following conditions: 2
- i) Mark is greater than or equal to 80 but less than 90
ii) Ch is an uppercase letter
- (c) Evaluate the following expressions 2
- i) a=10, b=5, c=11
 $(a >= b) \ || \ (!c == b) \ \&\& \ (c < a)$
- ii) a, b, c are integers and d is a floating point number . The value of a =8 , b=4 and d=2.5. What is the value of c?
 $c = d + a + b \% a$
4. How many times the following loop will be executed? 1
- (a)

```
int s=10 , k =1;
do
{
s += k;
k- -;
cout<< s;
} while(k);
```
- (b) Rewrite the following code using if else statement 2
- ```
int a;
cin>>a;
switch(a)
{
case 1 : cout<<"Sunday";
break;
case 2 :
case 3 :
case 4 :
case 5 :
case 6 : cout<<" Week day";
break;
case 7 : cout<<"Weekend";
default : cout<<"Wrong entry";
}
```
- (c) Rewrite using while loop                      1
- ```
int sum=0;
```

```
for ( int f= 1 ; f<5 ;++f)
sum += f;
```

5. Identify the syntax errors in the following program segments, underline the corrections and write the correct form.

(a) `include<iostream.h>>` 2
`void main()`
{
 `int i ; a;`
 `cin >> a;`
 `if(a>= 2 AND a<=10)`
 `cout<<" Within range";`
 `else if`
 `cout<< "Not within range";`
}

(b) `# include<iostream.h>` 2
`void main()`
`float a;`
`const int b;`
`b=10;`
`a = b % 3.1;`
`cout <<\n"a="a;`
}

6. Give the output:

(a) `# include<iostream.h>` 3
`void main()`
{
 `int a= 10 , b=12;`
 `for(int i= 1 ; i<=2 ; i++)`
 {
 `cout<<"\n[1]"<< a++<< " : " << b- 5;`
 `cout<<"\n[2]"<< ++a<< " : " << b+5;`
 }
}

(b) `# include<iostream.h>` 2
`void main()`
{
 `int y = 1, i= 5;`
 `while(i)`
 {
 `y *= i--;`
 }

```
cout<< y;  
}
```

7. Write a C++ program for the following.
- (a) To input one character and display whether it is uppercase or lowercase or digit or special character. 3
 - (b) To count the number of digits in a given number (For eg. If the number is 1346 , number of digits = 4) 3
 - (c) To find the largest of 3 numbers using conditional operators. 3
 - (d) Display the sum of negative number, sum of positive even number, sum of positive odd numbers from a list of numbers entered by the user. The list terminates when the number entered is zero. 4
 - (e) Display a menu regarding Rectangle Operations (Area, Perimeter and Diagonal of a rectangle) and perform according to users response. 4
 - (f) Check a given number is Prime or not. 4
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