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INDIAN SCHOOL MUSCAT FIRST TERM EXAMINATION

COMPUTER SCIENCE

CLASS: XI

Sub. Code: 083

Time Allotted: 3 Hrs

Max .Marks: 70

18.09.2017

General Instructions:

1. Answer all the questions.
2. Answer all the subdivisions of a question in sequence.
3. Programming Language is C++.
4. Write Programs neatly and clearly.

- 1 a. What do mean by FIREWIRE. 1
- b. Write the full form of the following 2
- i. RISC ii. ISCII
- c. Distinguish between internal and external memory. Any two points. 2
- 2 a. What do you understand by code generation. 1
- b. Define the following terms: i. Keyword ii. Tokens 2
- c. Differentiate between logical error and syntax error. Also give suitable examples. 2
- 3 a. Answer the following : 1*3
- i. Write an example for Dynamic initialization of a variable.
- ii. Write a declaration statement to declare a constant PI with a value 3.14.
- iii. Name the header file for the functions setw() and pow().
- b. Which character is automatically added to strings in C++? Write any two rules for naming identifiers. 2
- c. Rewrite the following C++ Program after removing the errors (if any) 2

```
#include[iostream.h]
void main
{
    char a;
    cout<< "Enter a character";
    cin<<a;
    int x=56;
    cout<< "Age = "<< ;
}
```

- d. Define the following terms : 3
- i. Fundamental data type
 - ii. Data type modifier
 - iii. Reference Variable
- 4 a. What do you mean by type casting? 1
- b. Write an equivalent C++ statement for $ut+1/2 ft^2$ 1
- c. Construct logical expressions to represent the following condition : 2
- i. Donation is in the range 4000-5000 or guest is 1.
 - ii. ch is a lower case letter
- d. Identify the error and correct the following expressions: 2
- i. `result=350 || <200`
 - ii. `income>=5000||&&val<>300`
- e. Write the output for the following: 2
- i. `int i=100;`
`cout<<i++<<--i<<i++<<--i;`
 - ii. `int c, a, b=3;`
`c=(a=5,a+b);`
`cout<<a * b<<'\t'<<c;`
- f. Answer the following : 2
- i. Write a statement that uses a conditional operator to set bonus as 2500 if salary is more than 5000, and to 1000 otherwise.
 - ii. What is the use of sizeof operator?
- 5 a. What is empty loop? Give an example. 1
- b. Explain the use of continue statement in a C++ program. 1
- c. Write any two differences between entry control loop and exit control loop. 2
- d. Write a program using nested for loop to produce the following design : 2
- ```

*
**


```
- e. Rewrite the following code fragment using while loop 2
- ```

int b;
float S=1;
for (b=100; b>=10; b-=5)
    S*=b;
cout<<S;

```

- f. Rewrite the following using switch-case statement:

```
char code;
cin>>code;
if code == 'A' cout <<"Agra";
else
if code == 'B' cout << "Bihar";
else
if code == 'C' cout <<"Chennai";
else
cout<<"Enter correct code A/B/C";
```

- 6 a. Rewrite the following C++ code after removing any/all syntactical errors with each correction underlined.

2

// Program to print all even numbers from 2 to 100

```
#include<iostream.h>
```

```
void main()
```

```
{ int n;
  do
  { cout<<n<<"\t";
    n+=1;
  } while(n=100)
}
```

- b. Predict the output of the following code fragment assume all the required header files are included :

3

```
void main()
{ for (int i=10; i>6; --i)
  { for (int j=1; j<4; j+=2)
    cout<<i<<j<<"\t";
    cout<<endl;}
}
```

- c. Write a short program to print the following : 1 4 7 1040

3

- d. Write a program using nested loop to produce the following design :

3

```
  1
 1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

- e. Write a program using for loop to accept a number and check whether it is a prime number or not using while loop.

3

- 7a. Write a program to find and print the sum of the following series :

4

$$1 + \frac{y^2}{3!} + \frac{y^4}{6!} - \frac{y^6}{9!} + \frac{y^8}{12!} + \dots \text{ upto } n \text{ terms.}$$

- b. Write a program to accept the sales made by the salesman. Calculate and display commission with the help of the following rules. 4

Sales	Commission Rate
10000 or more	20%
8000 -9999	30%
7999 or less	20%

- c. Write a menu driven program in C++ which displays the following menu : 4

1. Check a ODD or EVEN
2. Palindrome
3. Quit

The program reads a choice 1, 2 or 3 from the user and performs the following

If the user enters a choice 1 read a number and check whether it is ODD or EVEN number.

If the choice is 2 read a number and check whether it is palindrome or not.

If the choice is 3 the program terminates.

Any other choice should display an error message.

- d. Write a Program to find and print the sum of first n natural numbers using do..while loop. 4

End of the Question Paper