**Sample Paper – 2013
Class – XI
Subject –COMPUTER SCIENCE**

##

Max Marks 70 Duration 3 hrs

Note:- All questions are compulsory

 Figures to right indicate full marks

 Use c++ as programming language

 This question paper contains 30 questions

Q1)

 a) How is a compiler different from interpreter ? 2

b) Name any one Super Computer developed by India . 1

c) What is an Operating System ? What are its functions ? 3

d) What is significance of Recycle bin ? 2

e) convert

 (i) ( 2345)**10**= ( ? )**16**

 (ii) (0100111010001)**2** =( ? )**8 2**

Q2)

a) What do you mean by syntax error? 1

b) Why logical errors are harder to locate? 2

c)Mention different steps in program design 3

d) What is role of comment and indentation in program ? 2

e) How are meaningful identifiers useful ? 2

Q3)

a)What will be result of following statements if p=10 , q=10 initially 2

 (i) ++p<=10 (ii) q++<=10

b) Write a c++ program to input a number (n). If the number is odd and positive

 print its square root otherwise print n5 3

c) Classify the following variable names of c++ into valid and invalid category 3

 (i) 1no (ii) num 1 (iii) num (iv) num1num (v) num+1 (vi) num.1

d)Why iostream.h file is included in every c++ programm ? 2

e) Explain conditional operator (?) with example in c++ . 3

f) Name any two derived data types of c++ . 2

Q4)

a) Evaluate x=- -y +2y if y=3 3

b) Give name of header files to which following inbuilt functions belong to . 2

 1) exit() 2) strcmp( ) 3) toupper( ) 4) abs( )

c) Find syntax error(s) if any in following program ( Assume all header files are present) 2

 main<>

{ int c;

 switch( c );

case 1.5: { cout<<” India is great\n”;

 } break;

‘case’ 2: { cout<<” hello\n”;

 } break;

} // end of main

} // end of switch

d) Define /Declare following given arrays in cpp 1

i)Array named mark with 10 integer values

ii)array named avg with 8 float values

e) Convert following while loop to for loop 2

int x=0;

while(x<=100)

{ cout<<” This is computer science paper\n”;

 cout<<”good-bye\n”;

 x+=2;

}

f ) Which character is statement terminator in cpp ? 1

g) Write a cpp program to compute compound interest 2

h) What is difference between / and % operators in c++ ? 2

i)Give output of following program ( Assume all header files are present) 3

void main( )

{ void execute(int &b,int c=100);

 int M=90, N=10;

execute(M);

cout<<M<<"\t"<<N<<"\n";

execute(M,N);

cout<<M<<"\t"<<N<<"\n";

}

void execute(int &b,int c)

{ int temp=b+c;

b+=temp;

if(c==100)

cout<<temp<<"\t"<<b<<"\t"<<c<<"\n";

}

j) What are differences between while loop and do while loop ? 3

k) Explain use of random function in c++ with an example. 3

l) Design a cpp program to define a structure for a student having rollno(int) percentage (float), grade char. Input and output data for n students 4

m) Write a cpp program to convert a decimal number to binary number 4

n) Give output of following code. 3

 #include<iostream.h>

int m=5; void check();

void main( )

{ int m=20;

 {

 int m=10\*::m;

 cout<<"m="<<m<<"::m="<<::m<<endl;

 } check();

 cout<<"m="<<m<<"::m="<<::m<<endl;

 check(); cout<<"::m="<<::m<<"m="<<m<<endl;

 }

 void check()

 { ++m;

 }

 COMPUTER SCIENCE MARKING SCHEME

Q1)

 a) How is a compiler different from interpreter 2

 01 mark each for two correct differences

 Partial correct answer to be given 01 mark

b) Name any one Super Computer developed by India 1

01 mark each for two correct names

c) What is an Operating System ? What are its functions 3

01 mark each for definition

02 marks for functions

 Partial correct answer to be given appropriate marks

d) What is significance of Recycle bin 2

02 mark for correct explanations

 Partial correct answer to be given 01 mark

e) convert

 (i) ( 2345)**10**= ( ? )**16** (ii) (0100111010001)**2** =( ? )**8 2**

 01 mark each for proper conversion

 Partial correct answer to be given appropriate marks

Q2)

a) What do you mean by syntax error? 1

 01 mark for correct answer

b) Why logical errors are harder to locate? 2

02 mark for correct explanation

Partial correct answer to be given appropriate marks

c)Mention different steps in program design 3

 1 mark for explanation and 02 marks for different steps

Partial correct answer to be given appropriate marks

d) What is role of comment and indentation in program ? 2 02 marks each correct explanation

 Partial correct answer to be given appropriate marks

e) How are meaningful identifiers useful 2

02 mark for explanation

 Partial correct answer to be given appropriate marks

Q3)

a)What will be result of following statements if p=10 , q=10 initially 2

 (i) ++p<=10 (ii) q++<=10

01 mark each for correct answer

b) Write a c++ program to input a number (n). If the number is odd and positive

 print its square root otherwise print n5

header files ½ marks, variable declaration ½ marks, input ½ , process 1 o/p ½ 3

c) Classify the following variable names of c++ into valid and invalid category 3

 (i) 1no (ii) num 1 (iii) num (iv) num1num (v) num+1 (vi) num.1 ½ mark each for correct classification

d)Why iostream.h file is included in every c++ programm 2

02 mark for proper explanation

Partial correct answer to be given appropriate marks

e) Explain conditional operator (?) with example in c++ 3

01 mark each for proper explanation

02 marks for example

Partial correct answer to be given appropriate marks

f) Name any two derived data types of c++ 2

01 mark each for correct names

Q4)

a) Evaluate x=- -y +2y if y=3 3

03 marks for correct answer

b) Give name of header files to which following inbuilt functions belong to 2

 1) exit() 2) strcmp( ) 3) toupper( ) 4) abs( )

½ mark each for correct header file name

c) Find syntax error(s) if any in following program ( Assume all header files are present) 2

½ mark for each error

 main<>

{ int c;

 switch( c );

case 1.5: { cout<<” India is great\n”;

 } break;

‘case’ 2: { cout<<” hello\n”;

 } break;

} // end of main

} // end of switch

d) Define following given arrays in cpp 1

i)Array named mark with 10 integer values

ii)array named avg with 8 float values

½ mark each for correct declaration

e) Convert following while loop to for loop 2

int x=0;

while(x<=100)

{ cout<<” This is computer science paper\n”;

 cout<<”good-bye\n”;

 x+=2;

}

02 marks for proper conversion

Partial correct answer to be given appropriate marks

f ) Which character is statement terminator in cpp ? 1
 01 mark for correct answer

g) Write a cpp program to compute compound interest 2

variable declaration ½ marks, input ½ , process and o/p 1

h) What is difference between / and % operators in c++ ? 2

02 marks for difference and brief explanation

i)Give output of following program ( Assume all header files are present) 3

void main( )

{ void execute(int &b,int c=100);

 int M=90, N=10;

execute(M);

cout<<M<<"\t"<<N<<"\n";

execute(M,N);

cout<<M<<"\t"<<N<<"\n";

}

void execute(int &b,int c)

{ int temp=b+c;

b+=temp;

if(c==100)

cout<<temp<<"\t"<<b<<"\t"<<c<<"\n";

}

03 marks for correct o/p, Partial correct answer to be given appropriate marks

j) What are differences between while loop and do while loop 3

03 marks for correct differences , , Partial correct answer to be given appropriate marks

k) Explain use of random function in c++ with an example 3

02 marks for explanation, 01 mark for example Partial correct answer to be given appropriate marks

l) Design a cpp program to define a structure for a student having rollno(int) percentage (float), grade char. Input and output data for n students

header files ½ marks, variable declaration ½ structure def 01 marks, input ½ , process 1 o/p ½ 4

m) Write a cpp program to convert a decimal number to binary number 4

header files ½ marks, variable declaration ½ marks, input ½ , process 1 ½ o/p 1

n) Give output of following code 3

 #include<iostream.h>

int m=5; void check();

void main( )

{ int m=20;

 {

 int m=10\*::m;

 cout<<"m="<<m<<"::m="<<::m<<endl;

 } check();

 cout<<"m="<<m<<"::m="<<::m<<endl;

 check(); cout<<"::m="<<::m<<"m="<<m<<endl;

 }

 void check()

 { ++m;

 }

01 mark each for correct o/p

# WEST ZONE SAINIK SCHOOLS

CENTRALISED EXAMINATION (FEB-2013)