**CHAPTER -1**

**C++ REVISION TOUR**

**QUESTION BANK**

**FOR SLOW LEARNERS**

1. **Name the header files that shall be needed for the following code:**

void main( )

{

char String[ ] = “String”;

cout << setw(2)<<String;

}

1. **Which C++ header file(s) will be essentially required to be include to run/execute the following C++ code: [CBSE-2010]**

void main()

{

int Rno=24; char name[ ]=”Alma Mater”;

cout<<setw(10)<<Rno<<setw(20)<<name<<endl;

}

1. **Name the header files that shall be needed for the following code:**

void main( )

{

char word[]=”Board Exam”;

cout<<setw(20)<<word;

}

1. **Name the header file(s) that shall be needed for successful compilation of the following C++ code.**

void main( )

{

char String[20];

gets(String);

strcat(String,”CBSE”);

puts(String);

}

1. **Name the header file(s) that shall be needed for successful compilation of the following C++ code**.

void main( )

{

char Text[40];

strcpy(Text,”AISSCE”);

puts(Text); }

1. **Name the header file to which the following below:** 
   1. abs( ) (ii) isupper( )
2. **Name the header file to which the following belong**:
   1. pow ( ) (ii)random( )
3. **Name the header files to which the following belong:**
   1. abs( ) (ii) strcmp( )
4. **Name the header files to which the following belong:** 
   1. puts( ) (ii) isalnum( )
5. **Write the names of the header files to which the following belong:** 
   1. gets( ) (ii) strcmp( ) (iii)abs( ) (iv)isalnum( )
6. **Name the header file, to which the following built-in function belongs:** 
   1. strcmp( ) (ii)getc( )
7. **Name the header files of C++ to which the following functions belong:**

(i)get( ) (ii)open( ) (iii)abs( ) (iv)strcat( )

1. **Name the header file to be included for the use of the following built in functions:** (i)getc( ) (ii)strcat()
2. **Name the header file, to which following built in function belong:** 
   1. isupper( ) ( ii)setw() (iii)exp( ) (iv)strcmp( )
3. **Why main( ) function is so special. Give two reasons?**
4. **Name the header file of C++ to which following functions belong.**

(i)strcat( ) (ii) scanf( ) (iii) getchar( ) (iv)clrscr( )

1. **Name the header files, to which the following built in functions belongs to:**

(i)cos( )(ii)setw( )(iii)toupper( )(iv)strcpy( )

1. **Name the header files, to which the following built in functions belongs to:**

(i)cos( )(ii)setw( )(iii)toupper( )(iv)strcpy( )

1. **Name the header file to, which following built-in functions belong:**
   1. strcpy() *(ii)* isdigit() *(iii)* log() *(iv)* puts()
2. **Name the header file to be included for the use of following built-in functions:** 
   1. frexp() *(ii)* toupper()
3. **Name the header flies of C++ to which the following functions belong:** 
   1. write() *(ii)* arc() *(iii)* open() *(iv)* strlen()
4. **Name the header files of C++ to which the following functions belong:**
   1. get() (ii) open() (iii) abs() (iv) strcat()
5. **Name the header files of C++ to which the following functions belong:**
   1. read() (ii) open() (iii) get() (iv) strcmp()
6. **Name the header fLle,to which the following built-in functions belong:**
   1. strcpy 0 (ii) gets()
7. **Name the header file, to which the following built-in functions belong:**
   1. strcmp() (ii) getc()
8. **Write the names ofthe header flies to which the following belong:**
   1. sqrt() (ii) isalpha() (iii) puts() (iv) strcpy()
9. **Write the names ofthe header flies to which the following belong:**
   1. gets() (ii) strcmp() (iii) abs() (iv) isalnum()
10. **Write the name of header flies to which the following belong:**
    1. sqrt() (ii) strcpy() (iii) isalpha() (iv) open()

**FOR MEDIUM ACHIEVERS**

1. **Rewrite the following program after removing the syntactical error(s) if any. Underline each correction**.

#include<iostream.h>

void main( )

{ F = 10, S = 20;

test(F;S);

test(S); }

void test(int x, int y = 20)

{ x=x+y;

count<<x>>y;}

1. **Find the output of the following program:**

#include<iostream.h>

void main( )

{ int U=10,V=20;

for(int I=1;I<=2;I++)

{ cout<<”[1]”<<U++<<”&”<<V 5 <<endl;

cout<<”[2]”<<++V<<”&”<<U + 2 <<endl; } }

1. **Rewrite the following C++ program after removing the syntax error(s) if any. Underline each correction.**  include<iostream.h>

class FLIGHT

{

Long FlightCode;

Char Description[25];

public

void addInfo()

{

cin>>FlightCode; gets(Description);

}

void showInfo()

{

cout<<FlightCode<<”:”<<Description<<endl;

} };

void main( )

{ FLIGHT F;

addInfo.F();

showInfo.F; }

1. **Rewrite the following program after removing the syntax error(s) if any. Underline each correction.**

#include<iostream.h>

void main( )

{ One=10,Two=20;

Callme(One,Two);

Callme(Two); }

void Callme(int Arg1,int Arg2)

{ Arg1=Arg1+Arg2;

Count<<Arg1>>Arg2; }

1. **In the following program, find the correct possible output(s)from the options:**

#include<stdlib.h>

#include<iostream.h>

void main( )

{ randomize( );

char City[ ][10]={“DEL”, “CHN”, “KOL”, “BOM”, “BNG”};

int Fly;

for(int I=0; I<3;I++) {

Fly=random(2) + 1;

cout<<City[Fly]<< “:”; } }

**Outputs:**

(i) DEL : CHN : KOL: (ii) CHN: KOL : CHN:

(iii) KOL : BOM : BNG: (iv) KOL : CHN : KOL:

1. **In the following program, find the correct possible output(s)from the options:**

#include<stdlib.h>

#include<iostream.h>

void main( )

{ randomize( );

char Area[ ][10]={“ NORTH”, “SOUTH”, “EAST”, “WEST”};

int ToGo;

for(int I=0; I<3;I++) {

ToGo=random(2) + 1;

cout<<Area[ToGo]<<”:”; } }

**Outputs:**

(i) SOUTH : EAST : SOUTH : (ii) NORTH : SOUTH : EAST :

(iii) SOUTH : EAST : WEST : (iv) SOUTH : EAST : EAST :

1. **Rewrite the following program after removing the syntactical error(s) if any. Underline each correction.**

#include<iostream.h>

const int Max 10;

void main()

{ int Numbers[Max];

Numbers = {20,50,10,30,40};

for(Loc=Max-1;Loc>=10;Loc--)

cout>>Numbers[Loc]; }

1. **In the following C++ program what is the expected value of Mysore from options (i) to (iv) given below.Justify your answer.**

#include<stdlib.h>

#include<iostream.h>

void main( )

{ randomize( );

int Score[ ] = {25,20,34,56,72,63},Myscore;

cout<<Myscore<<endl; }

Ii) 25 (ii) 34 (iii) 20 (iv) None of the above.

1. **Find the output of the following program**

#include<iostream.h>

void main( )

{ long NUM=1234543;

int F=0,S=0;

do

{ int R=NUM % 10;

if (R %2 != 0)

F += R;

else

S += R;

NUM / = 10;

} while (NUM>0);

cout<<F-S; }

1. **Rewrite the following program after removing the syntactical error(s), if any. Underline each correction.**

#include<iostream.h>

const int Multiple 3;

void main( )

{ value = 15;

for(int Counter = 1;Counter = <5;Counter ++, Value -= 2)

if(Value%Multiple = = 0)

cout<<Value \* Multiple;

cout<<end1;

else

cout<<Value + Multiple <<endl; }

1. **Find the output of the following program**

#include<iostream.h>

#include<string.h>

#include<ctype.h>

void Convert(char Str[ ],int Len)

{ for(int Count=0;Count<Len;Count++)

{ if(isupper(Str[Count]))

Str[Count]=tolower(Str[Count]);

else if (islower(Str[Count]))

Str[Count]=toupper(Str[Count]);

else if(isdigit(Str[Count]))

Str[Count]=Str[Count]+1;

else Str[Count]=.\*.;

} }

void main( )

{ char Text[ ]=”CBSE Exam 2005”;

int Size = strlen(Text);

Convert(Text,Size);

cout<<Text<<endl;

for(int C=0,R=Size . 1;C<=Size/2;C++,R--)

{ char Temp=Text[C];

Text[C]=Text[R];

Text[R]=Temp; }

cout<<Text<<endl; }

1. **The following code is from a game, which generate a set of 4 random numbers. Praful is playing this game, help him to identify the correct option(s) out of the four choices given below as the possible set of such numbers generated from the program code so that he wins the game. Justify your answer.**

#include<iostream.h>

#include<stdlib.h>

const int LOW=25;

void main()

{ randomize();

int POINT=5, Number;

for(int I=1;I<=4;I++)

{ Number=LOW+random(POINT);

cout<<Number<<":" <<endl;

POINT--; } }

1. 29:26:25:28: (ii)24:28:25:26:

(iii) 29:26:24:28; (iv)29:26:25:26:

**13) Rewrite the following program after removing the syntactical errors (if any). Underline each correction.**

#include [iostream.h]

class MEMBER

{

int Mno;float Fees;

PUBLIC:

void Register(){cin>>Mno>>Fees;}

void Display{cout<<Mno<<" : "<<Fees<<endl;}

};

void main()

{

MEMBER M;

Register();

M.Display();

}

**FOR HIGH ACHIEVERS ( HOTS)**

1. **Find the output of the following program;**

#include<iostream.h>

#include<ctype.h>

void main( )

{ char Text[ ] = “Mind@work!”;

for(int I=0; Text[I]!=’\0’;I++)

{ if(!isalpha(Text[I]))

Text[I]=”\*”;

else if(isupper(Text[I]))

Text[I]=Text[I]+1;

else

Text[I] = Text[I+1]; }

cout<<Text; }

1. **Find the output of the following program:**

#include<iostream.h>

#include<ctype.h>

void main( )

{ char Mystring[ ] = "what@OUTPUT!";

for(int I=0; Mystring[I]!=’\0’;I++)

{ if(!isalpha(Mystring[I]))

Mystring[I]=’\*’;

else if(isupper(Mystring[I]))

Mystring[I]=Mystring[I]+1;

else

Mystring[I] =Mystring[I+1];

} cout<<Mystring; }

1. **Find the output of the following program.**

#include<iostream.h>

void Withdef(int HisNum=30)

{ for(int I=20;I<=HisNum;I+=5)

cout<<I<<”,”;

cout<<endl; }

void Control(int &MyNum)

{ MyNum+=10;

Withdef(MyNum); }

void main()

{ int YourNum=20;

Control(YourNum);

Withdef();

cout<<.Number=.<<YourNum<<endl; }

1. **Find the output of the following program:**

#include<iostream.h>

void Indirect(int Temp=20)

{ for(int I=10;I<=Temp;I+=5)

cout<<I<<”,”;

cout<<endl; }

void Direct(int &Num)

{ Num+=10;

Indirect(Num); }

void main( )

{ int Number=20;

Direct(Number);

Indirect( );

cout<<”Number =”<<Number<<endl; }

1. **Find the output of the following program:**

#include<iostream.h>

#include<ctype.h>

void Secret(char Msg[],int N);

void main( )

{ char SMS=” rEPorTmE”;

Secret(SMS,2);

cout<<SMS<<endl; }

void Secret(char Msg[],int N)

{ for(int c=10;Msg[]1=’\0’;c++)

if(c%2==0)

Msg[c]= Msg[c]+N;

else if (isupper(Msg[c]))

Msg[c]=tolower(Msg[c]);

else

Msg[c]= Msg[c]-N; }

1. **Find the output of the following program:**

#include<iostream.h>

struct three\_d

{ int x,y,z; };

void movein(three\_d &t, int step=1)

{ t.x+=step;

t.y+=step;

t.z+=step; }

void moveout(three\_d &t, int step=1)

{ t.x-=step;

t.y+=step;

t.z-=step; }

void main()

{ three\_d t1={10,20,5},t2={30,10,40};

movein(t1);

moveout(t2,5);

cout<<t1.x<<","<<t1.y<<","<<t1.z<<endl;

cout<<t2.x<<","<<t2.y<<","<<t2.z<<endl;

movein(t2,10);

cout<<t2.x<<","<<t2.y<<","<<t2.z<<endl; }

1. **Write the output of the following program:**

#include<iostream.h>

int func(int &x,int y=10)

{ if(x%y==0) return ++x;else return y- -; }

void main( )

{ int p=20,q=23;

q=func(p,q);

cout<<p<<q<<endl;

p=func(q);

cout<<p<<q<<endl;

q=func(p);

cout<<p<<q<<endl; }

1. **Find the output of the following program.**

#include<iostream.h>

#include<ctype.h>

void Mycode(char Msg[],char ch)

{ for(int cnt=0;Msg[cnt]!='\0';cnt++)

{ if(Msg[cnt]>='B'&& Msg[cnt]<='G')

Msg[cnt]=tolower(Msg[cnt]);

else

if(Msg[cnt]=='A'||Msg[cnt]=='a')

Msg[cnt]=ch;

else

if(cnt%2==0)

Msg[cnt]=toupper(Msg[cnt]);

else

Msg[cnt]=Msg[cnt-1];

} }

void main()

{ char MyText[]="ApEACeDriVE";

Mycode(MyText,'@');

cout<<"NEW TEXT: "<<MyText<<" "<<endl; }

**9)** Write a function in C++ to merge the contents of two sorted arrays A & B into

third array C. Assuming array A and B are sorted in ascending order and the

resultant array C is also required to be in ascending order.

**10)** Write a function in C++ to search for a BookNo from a binary file "BOOK.DAT",

assuming the binary file is containing the objects of the following class. 3

class

{

int Bno;

char Title[20];

public:

int RBno(){return Bno;}

void Enter(){cin>>Bno;gets(Title);}

void Display(){cout<<Bno<<Title<<endl;}

};

**Answer to Questions**

**1 Marks Answer**

1. **Ans**) iomanip.h

iostream.h

1. **Ans**) iostream.h

iomanip.h

1. **Ans:** iostream.h

iomanip.h

1. **Ans)** stdio.h string.h
2. **Ans:** string.h, stdio.h
3. **Ans)** (i) abs( ) - math.h, stdlib.h, complex.h

(ii)isupper( ) - ctype.h

1. **Ans*:***
   * 1. abs( ) - math.h, stdlib.h, complex.h
     2. random( ) - stdlib.h
2. **Ans)** (i) abs( ) **-** stdlib.h, math.h, complex.h

strcmp( ) - string.h

1. **Ans)**

(i) puts( ) - stdio.h

(ii) isalnum( ) - ctype.h

1. **Ans:**
   * 1. gets( ) - stdio.h
     2. strcmp( ) - string.h
     3. abs( ) - math.h, stdlib.h,complex.h
     4. isalnum( ) - ctype.h
2. **Ans:**

(i) strcmp( ) - string.h

(ii)getc( ) - stdio.h

1. **Ans:**
   * 1. get( ) - iostream.h
     2. open( ) - fstream.h
     3. abs( ) - math.h, stdlib.h
     4. strcat( ) - string.h
2. **Ans:**
   * 1. getc( ) - stdio.h
     2. strcat( ) - string.h
3. **Ans)** 
   * 1. isupper( ) - ctype.h

(ii)setw( ) - iomanip.h

(iii)exp( ) - math.h

(iv)strcmp( ) - string.h

1. **Ans)**Execution of the program starts and ends at main( ). The main ( ) is the driver function of the program. If it is not present in a program, no execution can take place.
2. **Ans:** (i)strcat( ) - string.h

(ii)scanf( ) - stdio.h

(iii)getchar( ) - stdio.h

(iv)clrscr( ) - conio.h

1. **Ans:**
2. cos( ) - math.h
3. setw( ) - iomanip.h
4. toupper( ) - ctype.h
5. strcpy( ) - string.h
6. **Ans:**

(i) cos( ) - math.h

(ii) setw( ) - iomanip.h

(iii) toupper( ) - ctype.h

(iv) strcpy( ) - string.h

1. **Ans.**

(i) string.h *(ii)* ctype.h *(iii)* math.h *(iv)* stdio.h

1. **Ans.** (i) math.h *(ii)* ctype.h
2. **Ans**. (i) fstream.h *(ii)* graphics.h *(iii)* fstream.h *(iv)* string.h
3. **Ans.**

(i) iostream.h (ii) fstream.h (iii) math.h *(iv)* string.h

1. **Ans.**

(i) fstream.h (ii) fstream.h (iii) iostream.h *(iv)* string.h

1. **Ans**.

(i) string.h (ii) stdio.h>

1. **Ans**.

(i) string.h (ii) stdio.h

1. **Ans**.

(i) math.h (ii) ctype.h (iii) math.h (iv) string.h

1. **Ans**. (i) stdio.h (ii) string.h (iii) math.h (iv) ctype.h
2. **Ans.** (i) math.h (ii) strcpy.h (iii) ctype.h (iv) fstream.h

**2 marks Answers**

**1 Ans:**

#include<iostream.h>

void test(int x,int y=20); //Prototype missing

void main( )

{ int F = 10, S = 20; //Data type missing

Text(F**,**S); //Comma to come instead of ;

Text(S);}

void Text(int x, int y)

{ x=x+y;

cout<<x<<y; //Output operator << required }

**2 Ans:**Output:

[1]10&15

[2]21&13

[1]11&16

[2]22&14

**3Ans:** #include<iostream.h>

class FLIGHT

{

long FlightCode;

char Description[25];

public:

void addInfo()

{

cin>>FlightCode; gets(Description);

}

void showInfo()

{

cout<<FlightCode<<”:”<<Description<<endl;

} };

void main( )

{ FLIGHT F;

F.addInfo();

F.showInfo;}

**4Ans:**

void Callme(int Arg1,int Arg2=20);

#include<iostream.h>

void main( )

{ int One=10,Two=20;

Callme(One,Two); //Given ; instead of ,

Callme(Two); }

void Callme(int Arg1,int Arg2)

{ Arg1=Arg1+Arg2;

cout<<Arg1<<Arg2;}

**5 Ans)**

Since random(2) gives either 0 or 1, Fly value will be either 1 or 2.

(random(n) gives you any number between 0 to n-1) City[1] is .CHN.

City[2] is .KOL.

Since I value from 0 to 2 (ie<3), 3 iterations will takes place.

So the possible output consists 3 strings separated by :, each of

them may be either .CHN. or .KOL..

**So the possible output will be**

**(ii) CHN : KOL : CHN:**

**(iv) KOL :CHN : KOL:**

**6Ans)** Since random(2) gives either 0 or 1, ToGo value will be either 1 or 2.

(random(n) gives you any number between 0 to n-1) Area[1] is .SOUTH.

Area[2] is .EAST.

Since I value from 0 to 2 (ie<3), 3 iterations will takes place. So the possible output consists 3 strings separated by :, each of them may be either .SOUTH. or .EAST..

**So the possible output will be**

**(i) SOUTH : EAST : SOUTH :**

**(iv) SOUTH : EAST : EAST :**

**7 Ans)**#include<iostream.h>

const int Max**=**10;//Constant Variable .Max. must be

//initialized. Declaration Syntax Error

void main( )

{ int Numbers[Max]**={20,50,10,30,40}**;

for(Loc=Max-1;Loc>=0;Loc--)

cout>>Numbers[Loc];}

**8 Ans:** Expected Output:

(iv) None of the above.

**9 Ans:** Output: 2

**10)Ans:** #include<iostream.h>

const int Multiple**=**3;

void main( )

{ **int V**alue = 15;

for(int Counter = 1;Counter **<=**5;Counter ++, Value -= 2)

if(Value%Multiple == 0)

**{** cout<<Value \* Multiple;

cout<<endl; **}**

else

cout<<Value + Multiple <<endl; }

**11Ans:**Output:

cbse\*eXAM\*3116

6113\*MXAe\*esbc

**12.** 27:

27:

27:

26:

**13.** #include <iostream.h>

class MEMBER

{

int Mno;

float Fees;

public:

void Register(){cin>>Mno>>Fees;}

void Display(){cout<<Mno<<" : "<<Fees<<endl;}

};

void main()

{

MEMBER M;

M.Register();

M.Display();

}

**3 Marks answers**

**1)Ans:**

**Solution:**

Text[ ] =



**When I=0**

Since Text[0] is ‘M’, Upper Case Letter,

(isupper(Text[I]) will becomes true.

So Text[I] =Text[I]+1

So Text[0]=Text[0]+1

Text[0] =77(ASCII Value of M) + 1 = 78 =**N**(78 is ASCII Value of N)

Now the String Text[ ] =



**When I=1**

Since Text[1] is ‘i’, Which is a character, but which is not Upper

case,

else part will be executed.

Ie Text[I]=Text[I+1]

Here Text[1]=Text[1+1]

=Text[2]

Ie ‘n’ will be stored in place of ‘I’

Now the String Text[ ] =



**When I=2**

Since Text[2] is ‘n’, Which is a character, but which is not Upper

case, else part will be executed.

Ie Text[I]=Text[I+1]

Here Text[2]=Text[2+1]

=Text[3]

Ie ‘d’ will be stored in place of ‘n’

Now the String Text[ ] =



**When I=3**

Since Text[3] is ’d’, Which is a character, but which is not Upper

case, else part will be executed.

Ie Text[I]=Text[I+1]

Here Text[3]=Text[3+1]

=Text[4]

Ie ‘@’, will be stored in place of ,’d’

Now the String Text[ ] =



**When I=4**

Since Text[4] is ‘@’, Since which is not an alphabet,

(!isalpha(Text[I])) will becomes true.

Ie **if(!isalpha(Text[I]))**

**Text[I]=’\*’;**

Ie Text[4]=’\*’

Ie ‘\*’ will be stored in place of ’@’

Now the String Text[ ] =



**When I=5**

Since Text[5] is ‘W’, Upper Case Letter,

(isupper(Text[I]) will becomes true.

So Text[I] =Text[I]+1

So Text[5]=Text[5]+1

Text[5] =87(ASCII Value of W) + 1 = 88 =**X**(88 is ASCII Value of X)

Now the String Text[ ] =



**When I=6**

Since Text[6] is ‘o’, Which is a character, but which is not Upper

case, else part will be executed.

Ie Text[I]=Text[I+1]

Here Text[6]=Text[6+1]

=Text[7]

Ie ‘r’ will be stored in place of ‘o’

Now the String Text[ ] =



**When I=7**

Since Text[7] is ‘r’, Which is a character, but which is not Upper

case, else part will be executed.

Ie Text[I]=Text[I+1]

Here Text[7]=Text[7+1]

=Text[8]

Ie ‘k’ will be stored in place of ‘r’.

Now the String Text[ ] =



**When I=8**

Since Text[8] is ‘k’, Which is a character, but which is not Upper

case, else part will be executed.

Ie Text[I]=Text[I+1]

Here Text[8]=Text[8+1]

=Text[9]

Ie ‘!’ will be stored in place of ‘k’

Now the String Text[ ] =



**When I=9**

Since Text[9] is ‘!’, Since which is not an alphabet,

(!isalpha(Text[I])) will becomes true.

Ie **if(!isalpha(Text[I]))**

**Text[I]=’\*’;**

Ie Text[9]=’\*’

Ie ‘\*’ will be stored in place of ‘!’

Now the String Text[ ] =



Output: **Nnd@\*Xrk!\***

**2) Ans:**

Output: **hat@\*PVUQVU\***

**3)Ans:**

Output:

20,25,30,

20,25,30,

Number=30

**4)Ans:**

Output: 10,15,20,25,30,

10,15,20,

Number =30

**5)Ans:**

Output: teRmttoe

**6) Ans**:

Output:

11, 21 ,6

25 , 15, 35

35, 25, 45

**7)Ans:** Output:

**2023**

**1023**

**1111**

**8)Ans: Output:**

New Text=@@@@ccddIIe

**9)** **Ans: Output:**

void AddNSave(int A[ ],int B[ ],int C[ ],int N,int M, int &K) 3

{

int I=0,J=0;

K=0;

while (I<N && J<M)

if (A[I]<B[J])

C[K++]=A[I++];

else

if (A[I]>B[J])

C[K++]=B[J++];

else

{

C[K++]=A[I++];

J++;

}

for (;I<N;I++)

C[K++]=A[I];

for (;J<M;J++)

C[K++]=B[J];

}

* 1. **Ans:Output:**

void BookSearch()

{

fstream FIL;

FIL.open("BOOK.DAT",ios::binary|ios::in);

BOOK B;

int bn,Found=0;

cout<<"Enter Book No. to search…"; cin>>bn;

while (FIL.read((char\*)&S,sizeof(S)))

if (FIL.RBno()==bn)

{

S.Display();

Found++;

}

if (Found==0) cout<<"Sorry! Book not found!!!"<<endl;

FIL.close();

}