

## Dinesh Rajan

*Dinesh Rajan has got a Computer science & Engineering degree from University of Kerala in 1999. After this he has been working with different software companies. Currently he is working as Sr. Software Engineer with Hewlett-Packard. Visit him at <http://www.dvrsol.com/>*

*This book is a collection of 550+ multiple choice questions that covers all the core C++ language concepts. The main focus is made on C++ syntax and concepts. Special care has been taken to expose most of the hazards users might face while using the language. The problems provided are designed to cover every aspect of C++ in a much easier and intuitive way. You will be learning all the language concepts, in the best possible way, which then will then empower you for exploiting the language like a seasoned professional*

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Challenges with C++ \* A compilation of 550+ MCQ's \* Dinesh Rajan

# Challenges with C++

A compilation of 550+ MCQ's

by

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## Overview

The book is divided into different chapters, each roughly dealing with one specific feature of C++. Each chapter is further divided into three parts, which are as illustrated below

## Questions

Here, all the questions are listed numbering 1, 2, 3, etc... Provided along with the questions are possible answers for them marked a, b, c, etc... Some of the answers could be of type yes/no.

## Answers

Solutions to the questions are provided at this section. Some of the answers are marked with symbols \* (star), + (plus) or both. A \* (star) symbol denotes that an explanation is available for the problem at the next section. A + (plus) symbol indicates that the answer given by your compiler might differ from the one that is provided as solution, and additionally, a short note about this discrepancy could be found in the description section.

## Description

This section gives a short explanation on how a particular answer was arrived at. This may even contain an account of differences in answers between different compilers.

The following acronyms are used here to represent a specific compiler.

<b>VC++</b>	Microsoft Visual C++ Compiler Version 6
<b>BC++</b>	Borland C++ for Win32 Version 5.5.1
<b>gcc</b>	GNU C version 2.95.3-6 (mingw special) (mingw32)

## Before you start

All the questions provided here have been thoroughly tested with the compilers available during the time this book was prepared. Sorry to say, but it has been noted at the time that most compilers do not fully implement ANSI C++ standards properly. Because of this, you might get different different answers, for a given problem, with different compilers. In such cases, the author has tried to point out the differences between the results at the description section. Do note that, the author has, in his knowledge, given the correct answers confirming to ANSI standard to the problem provided. However, under any circumstances, if you are finding any material provided to be erroneous, please feel free to notify him, so that he could make necessary amendments.

## Foreword

---

### **Tell me what you think!**

As a reader, you are the most critic and commentator on this book. I value your opinion and like to get your comments. You can e-mail, visit the site given below, or write to me directly and let me know what you did and did not like about this book — as well as what I could do to make this book a better one. Any opinion you are willing to pass my way are most welcome

www : *<http://www.dvrsol.com/cbk.html>*

E-mail : *[cbk@dvrsol.com](mailto:cbk@dvrsol.com)*

Mail : *Dinesh Rajan, 9434 Charterlawn Cir, Houston, TX 77070*

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## Chapter 15. Mixed Bundle

**15.01** Will the below code compile? Yes/No

```
#include <iostream.h>
{}
int main( ) {
    return 0 ;
}
```

**15.02** What is the output?

```
#include <iostream.h>
namespace ns {
    void f( int * i ) {
        cout << *i << endl ;
    }
} // namespace
void f( int * i ) {
    cout << *i+1 << endl ;
}
using ns::f ;
int main( ) {
    int i = 10 ;
    f( &i ) ;
    return 0 ;
}
```

**A** 10

**B** 11

**C** Compiler error

**15.03** What is the output?

```
#include <iostream.h>
void show() const {
    cout << "A";
}
int main( ) {
    show() ;
    return 0 ;
}
```

**A** A

**B** Compiler error

**15.04** What is the output?

```
#include <stdio.h>
```

```
int main( ) {
    printf("World ");
    return 0 ;
}
namespace ns {
    int x=printf("Hello ") ;
}
```

- |                |                      |
|----------------|----------------------|
| <b>A</b> Hello | <b>B</b> Hello World |
| <b>C</b> World | <b>D</b> World Hello |

**15.05** What is the output?

```
#include <stdio.h>
namespace {
    int i = 10 ;
    printf("%d,", i) ;
}
int main( ) {
    printf("%d\n", i) ;
    return 0 ;
}
```

- |                         |                |
|-------------------------|----------------|
| <b>A</b> 10             | <b>B</b> 10,10 |
| <b>C</b> Compiler error |                |

**15.06** What is the output?

```
#include <stdio.h>
namespace {
    int i = 10 ;
    int j = i++ ;
}
int main( ) {
    printf("%d\n", i) ;
    return 0 ;
}
```

- |                         |             |
|-------------------------|-------------|
| <b>A</b> 10             | <b>B</b> 11 |
| <b>C</b> Compiler error |             |

**15.07** What is the output?

```
#include <iostream.h>
int i = 1 ;
namespace A {
    int i = 2 ;
    namespace B {
```

```

    int i = 3 ;
}
}
namespace ns {
    int i = 4 ;
}
int main( ) {
    namespace ns = A::B ;
    cout << i << endl ;
    return 0 ;
}

```

A	1	B	2
C	3	D	4
E	Error		

**15.08** What is the output?

```

#include <iostream.h>
int i = 1 ;
namespace A {
    int i = 2 ;
    namespace B {
        int i = 3 ;
    }
}
namespace ns {
    int i = 4 ;
}
int main( ) {
    namespace ns = A::B ;
    using ns::i ;
    cout << i << endl ;
    return 0 ;
}

```

A	1	B	2
C	3	D	4
E	Error		

**15.09** What is the output?

```

#include <iostream.h>
namespace A {
    int i = 1 ;
    namespace B {
        int i = 2 ;
    }
}

```

```
int main( ) {
    namespace A = A::B ;
    using namespace A ;
    cout << i << endl ;
    return 0 ;
}
```

A	1	B	2
C	Compiler Error		

**15.10** What is the output?

```
#include <iostream.h>
template <class T, int i>
void fn( T t ) {
    if ( t > i) cout << "Hello World" ;
    else cout << "Bye World" ;
}
int main( ) {
    fn(2) ;
    return 0 ;
}
```

A	Hello World	B	Bye World
C	Error		

**15.11** What is the output?

```
#include <iostream.h>
template <class T>
T fn( T &t ) {
    return ++t ;
}
int main( ) {
    int i = 10 ;
    cout << fn( i ) ;
    return 0 ;
}
```

A	10	B	11
C	Error	D	

**15.12** What is the output?

```
#include <iostream.h>
template <class T>
T fn( T &t ) {
    return ++t ;
}
```

```
int main( ) {
    cout << fn( 10 ) ;
    return 0 ;
}
```

- |          |       |          |    |
|----------|-------|----------|----|
| <b>A</b> | 10    | <b>B</b> | 11 |
| <b>C</b> | Error |          |    |

**15.13** What is the output?

```
#include <iostream.h>
template <class T, class U>
    T fn( T t ) {
        return t++ ;
    }
int main( ) {
    cout << fn( 1 ) ;
    return 0 ;
}
```

- |          |       |          |   |
|----------|-------|----------|---|
| <b>A</b> | 1     | <b>B</b> | 2 |
| <b>C</b> | Error |          |   |

**15.14** What is the output?

```
#include <iostream.h>
template <class T, class U>
    U fn( T t ) {
        return t ;
    }
int main( ) {
    cout << fn<int,float>( 1.5 ) ;
    return 0 ;
}
```

- |          |       |          |     |
|----------|-------|----------|-----|
| <b>A</b> | 1     | <b>B</b> | 1.5 |
| <b>C</b> | Error |          |     |

**15.15** What is the output?

```
#include <iostream.h>
template <class T, class U>
    T fn( U u ) {
        return (T)u ;
    }
int main( ) {
    cout << fn<int>( 1.5 ) ;
}
```

```

    return 0 ;
}

```

A 1

B 1.5

C Error

**15.16** What is the output?

```

#include <iostream.h>
template <class U, class T>
    T fn( U u ) {
        return (T)u ;
    }
int main( ) {
    cout << fn<int>( 1.5 ) ;
    return 0 ;
}

```

A 1

B 1.5

C Error

**15.17** What is the output?

```

#include <iostream.h>
template <class T, class U>
    void fn( T t ) {
        cout << t ;
    }
int main( ) {
    fn<int,int>( 1.5 ) ;
    return 0 ;
}

```

A 1

B 1.5

C Error

**15.18** What is the output?

```

#include <iostream.h>
class A {
    char c ;
    char c1 ;
    double d ;
    double d1 ;
} ;
class B {
    double d ;
    char c ;
} ;

```

```

double d1 ;
char c1 ;
} ;
int main( ) {
    A a ;
    B b ;
    int diff = sizeof(a) - sizeof(b) ;
    if (diff==0) cout << "A = B" << endl ;
    if (diff < 0) cout << "A < B" << endl ;
    if (diff > 0) cout << "A > B" << endl ;
    return 0 ;
}

```

A A = B

B A &lt; B

C A &gt; B

15.19 What is the output?

```

#include <iostream.h>
class A {
    int i ;
public:
    A() {
        i = 5 ;
    }
    int geti() {
        return i++
    }
};
int main( ) {
    A a() ;
    cout << a.geti() ;
    return 0 ;
}

```

A 5

B 6

C Compiler Error

15.20 What is the output?

```

#include <iostream.h>
struct err {
    int errCode ;
    char* errString ;
};
err e = {1, "NoErr"} ;
int main( ) {

```

```

    try {
        throw e ;
    }
    catch ( err e ) {
        e.errCode = 2 ;
        e.errString = "Testing" ;
    }
    cout << e.errCode << ":" << e.errString ;
    return 0 ;
}

```

A 1:NoErr

B 2:Testing

C Error

15.21 What is the output?

```

#include <iostream.h>
class A {
    static int i ;
    public :
        void print(int=i) ;
};
void A::print(int val) {
    cout << val++ ;
}
int main( ) {
    A().print() ;
    return 0 ;
}

```

A 0

B 1

C Compile time error

D Link time error

15.22 What is the output?

```

#include <iostream.h>
class A {
    static int i ;
    public :
        void print(int=i) ;
};
void A::print(int val) {
    cout << val++ ;
}
int main( ) {
    A().print(0) ;
    return 0 ;
}

```

<b>A</b>	0	<b>B</b>	1
<b>C</b>	Compile time error	<b>D</b>	Link time error

**15.23** What is the output?

```
#include <iostream.h>
static union {
    int i ;
    static union {
        int j ;
    } ;
} ;
int main( ) {
    i = 5 ;
    cout << j ;
    return 0 ;
}
```

<b>A</b>	0	<b>B</b>	5
<b>C</b>	Garbage/Unpredictable	<b>D</b>	Compiler error

**15.24** What is the output?

```
#include <iostream.h>
static union {
    int i ;
} ;
static union {
    int j ;
} ;
int main( ) {
    i = 5 ;
    cout << j ;
    return 0 ;
}
```

<b>A</b>	0	<b>B</b>	5
<b>C</b>	Garbage/Unpredictable	<b>D</b>	Compiler error

**15.25** What is the output?

```
#include <iostream.h>
class A {
public:
    int i ;
} ;
int main( ) {
```

```
A a = {10} ;
cout << a.i ;
return 0 ;
}
```

- |          |                       |          |                |
|----------|-----------------------|----------|----------------|
| <b>A</b> | 0                     | <b>B</b> | 10             |
| <b>C</b> | Garbage/Unpredictable | <b>D</b> | Compiler error |

**15.26** What is the output?

```
#include <iostream.h>
class A {
public:
    static int i ;
    A(int j=1){i+=j;}
} ;
int A::i = 0 ;
int main( ) {
    A a = (A)2 ;
    cout << A::i ;
    return 0 ;
}
```

- |          |   |          |                |
|----------|---|----------|----------------|
| <b>A</b> | 1 | <b>B</b> | 2              |
| <b>C</b> | 3 | <b>D</b> | Compiler error |

**15.27** What is the output?

```
#include <iostream.h>
class A {
public:
    union {
        int i,j ;
    } ;
} ;
int main( ) {
    A a = {10} ;
    cout << a.j ;
    return 0 ;
}
```

- |          |                       |          |                |
|----------|-----------------------|----------|----------------|
| <b>A</b> | 0                     | <b>B</b> | 10             |
| <b>C</b> | Garbage/Unpredictable | <b>D</b> | Compiler error |

**15.28** What is the output?

```
#include <iostream.h>
class A {
```

```

int i ;
A(){i=5;}
public:
int geti(){return i;}
};
int main( ) {
A a ;
cout << a.geti() ;
return 0 ;
}

```

A 0

B 5

C Garbage/Unpredictable

D Compiler error

15.29 What is the output?

```

#include <iostream.h>
class A {
public:
int i ;
A(){i=1;}
A(int j=2) {i=j;}
};
int main( ) {
A a ;
cout << a.i ;
return 0 ;
}

```

A 1

B 2

C Garbage/Unpredictable

D Compiler error

15.30 What is the output?

```

#include <iostream.h>
class A {
public:
static int i ;
A(int j=1) {i+=j;}
};
int A::i = 0 ;
int main( ) {
A a ;
A b() ;
A c(1) ;
cout << A::i ;
return 0 ;
}

```

<b>A</b>	0	<b>B</b>	1
<b>C</b>	2	<b>D</b>	3
<b>E</b>	Compiler error		

**15.31** What is the output?

```
#include <iostream.h>
class A {
public:
    static int i ;
    A(){i=1;}
};
int main( ) {
    A a ;
    cout << a.i ;
    return 0 ;
}
```

<b>A</b>	0	<b>B</b>	1
<b>C</b>	Compile time error	<b>D</b>	Link time error

**15.32** What is the output?

```
#include <iostream.h>
class A {
public:
    int i ;
    A(int j=1) {
        i=j;
        cout << i ;
    }
};
class B {
public:
    A a ;
    B() {a = A(2) ;}
};
int main( ) {
    B b ;
    cout << b.a.i ;
    return 0 ;
}
```

<b>A</b>	1	<b>B</b>	12
<b>C</b>	2	<b>D</b>	22
<b>E</b>	122		

**15.33** What is the output?

```
#include <iostream.h>
class A {
public:
    static int i ;
    A(int j=1){i+=j;}
};
int A::i = 0 ;
int main( ) {
    try {
        throw A() ;
    } catch(A a){}
    cout << A::i ;
    return 0 ;
}
```

- |          |                       |          |                |
|----------|-----------------------|----------|----------------|
| <b>A</b> | 1                     | <b>B</b> | 2              |
| <b>C</b> | Garbage/Unpredictable | <b>D</b> | Compiler error |

**15.34** What is the output?

```
#include <iostream.h>
class A {
public:
    static int i ;
    A(int j=1){i+=j;}
    A(const A& j){i+=j.i;}
};
int A::i = 1 ;
int main( ) {
    A a ;
    A a1 = a ;
    cout << A::i ;
    return 0 ;
}
```

- |          |                |          |   |
|----------|----------------|----------|---|
| <b>A</b> | 1              | <b>B</b> | 2 |
| <b>C</b> | 3              | <b>D</b> | 4 |
| <b>E</b> | Compiler error |          |   |

**15.35** What is the output?

```
#include <iostream.h>
class A {
public:
    static int i ;
    A(int j=1){i+=j;}
};
```

```

int A::i = 0 ;
int main( ) {
    A* a[2] ;
    cout << A::i ;
    return 0 ;
}

```

A	0	B	1
C	2	D	3
E	Compiler error		

**15.36** What is the output?

Note: Ascii for '1' == 49

```

#include <iostream.h>
class A {
public:
    int i ;
    A(int j) {i=++j;}
} ;
int inc(A a) {
    return a.i ;
}
int main( ) {
    cout << inc('1') ;
    return 0 ;
}

```

A	1	B	2
C	49	D	50
E	Compiler error		

**15.37** What is the output?

```

#include <iostream.h>
class A {
public:
    static int i ;
    A(int j=1){i+=j;}
} ;
int A::i = 0 ;
int compare(A a1, A a2) {
    return a2.i - a1.i ;
}
int main( ) {
    if ( compare(1,2) ) cout << A::i ;
}

```

```

    cout << " bye" ;
    return 0 ;
}

```

- |          |                |          |       |
|----------|----------------|----------|-------|
| <b>A</b> | bye            | <b>B</b> | 0 bye |
| <b>C</b> | 1 bye          | <b>D</b> | 2 bye |
| <b>E</b> | Compiler error |          |       |

**15.38** What is the output?

```

#include <iostream.h>
class A {
    public :
        int i ;
        A& a ;
        A(int j=1):i(j), a(*this){}
        A* operator->(){return &a;}
} ;
int main( ) {
    A a ;
    cout << a->a->a->i ;
    return 0 ;
}

```

- |          |                        |          |       |
|----------|------------------------|----------|-------|
| <b>A</b> | 0                      | <b>B</b> | 1     |
| <b>C</b> | Garbage/ Unpredictable | <b>D</b> | Error |

**15.3** What is the output?

```

#include <iostream.h>
class A {
    public :
        int i ;
        A& a ;
        A(int j=1):i(j), a(*this){}
        A* operator->(){return &a;}
} ;
int main( ) {
    A a ;
    cout << a.a.a.i ;
    return 0 ;
}

```

- |          |                        |          |       |
|----------|------------------------|----------|-------|
| <b>A</b> | 0                      | <b>B</b> | 1     |
| <b>C</b> | Garbage/ Unpredictable | <b>D</b> | Error |

**15.40** What is the output?

```

#include <iostream.h>

```

```

class A {
public :
    int i ;
    A(int j=2):i(j) {}
    int operator*() {return i;}
};
int main( ) {
    A a ;
    cout << *a**a ;
    return 0 ;
}

```

A	0	B	2
C	4	D	Garbage/ Unpredictable
E	Error		

**15.41** What is the output?

```

#include <iostream.h>
class A {
public :
    int i ;
    A(int j=0):i(j) {}
    A& operator++(int j) {j>=0?i+=j:i++;return *this;}
};
int main( ) {
    A a ;
    a.operator++(-1) ;
    cout << a.i ;
    return 0 ;
}

```

A	-1	B	0
C	1	D	Error

**15.42** Will the below code compile? Yes/No

```

#include <iostream.h>
class A ;
int main( ) {
    A a ;
    return 0 ;
}
class A {
};

```

**15.43** Will the below code compile? Yes/No

```
#include <iostream.h>
class A {
    public:
        int i ;
        A(int j):i(j){}
};
int main( ) {
    A a[5] ;
    return 0 ;
}
```

**15.44** What is the output?

```
#include <iostream.h>
int f1() ;
int f2() ;
int a = f1();
int b = f2();

int f1() {
    cout << 1*b + 1 ;
    return 1*b + 1 ;
}
int f2() {
    cout << 1 ;
    return 1 ;
}
int main( ) {
    cout << "ab" ;
    return 0 ;
}
```

<b>A</b>	ab	<b>B</b>	01ab
<b>C</b>	10ab	<b>D</b>	11ab
<b>E</b>	Error		

**15.45** What is the output?

```
#include <iostream.h>
static int i = 0 ;
class A {
    public:
        int i ;
        A(){i=++::i;}
        ~A(){cout<<i;} ;
};
```

```
int main( ){
    A a[2] ;
    cout << "a" ;
    return 0 ;
}
```

<b>A</b> a	<b>B</b> a01
<b>C</b> a10	<b>D</b> a12
<b>E</b> a21	

**15.46** What is the output?

```
#include <iostream.h>
static int i = 0 ;
class A {
public:
    int i ;
    A(){i=++::i;}
    ~A(){cout<<i;} ;
} ;
int main( ){
    A a1, a2 ;
    cout << "a" ;
    return 0 ;
}
```

<b>A</b> a	<b>B</b> a01
<b>C</b> a10	<b>D</b> a12
<b>E</b> a21	

**15.47** What is the output?

```
#include <iostream.h>
class A {
public:
    int i ;
    A(int j=1):i(j) {delete this;} ;
} ;
int main( ) {
    A a ;
    cout << a.i ;
    return 0 ;
}
```

<b>A</b> 0	<b>B</b> 1
<b>C</b> Garbage/Unpredictable	<b>D</b> Compiler error

**15.48** What is the output?

```
#include <iostream.h>
#include <math.h>
int main( ) {
    float f = sqrt(-1) ;
    if (f==f)
        cout << "A" ;
    else
        cout << "B" ;
    return 0 ;
}
```

- |          |                       |          |                |
|----------|-----------------------|----------|----------------|
| <b>A</b> | A                     | <b>B</b> | B              |
| <b>C</b> | Garbage/Unpredictable | <b>D</b> | Compiler error |

**15.49** What is the output?

```
#include <iostream.h>
class A {
public :
    int i ;
    class B {
public:
        static A a;
        B() {a.i=5;}
    } ;
};
int main( ) {
    A a ;
    cout << a.i ;
    return 0 ;
}
```

- |          |                       |          |                |
|----------|-----------------------|----------|----------------|
| <b>A</b> | 0                     | <b>B</b> | 5              |
| <b>C</b> | Garbage/Unpredictable | <b>D</b> | Compiler error |

**15.50** What is the output?

```
#include <iostream.h>
class A {
public :
    int i ;
    class B {
public:
        static A a;
        B(int j=1) {a.i=j;}
    } ;
};
```

```
A A::B::a = A() ;
int main( ) {
    A::B b ;
    cout << A::B().a.i ;
    return 0 ;
}
```

- |          |                       |          |                |
|----------|-----------------------|----------|----------------|
| <b>A</b> | 0                     | <b>B</b> | 1              |
| <b>C</b> | Garbage/Unpredictable | <b>D</b> | Compiler error |

**15.51** What is the output?

```
#include <iostream.h>
class A {
public :
    class B {
public:
        A *a ;
    } ;
    int i ;
    B b ;
    A():i(1){b.a = this;} ;
} ;
int main( ) {
    A a ;
    cout << a.b.a->i ;
    return 0 ;
}
```

- |          |                       |          |                |
|----------|-----------------------|----------|----------------|
| <b>A</b> | 0                     | <b>B</b> | 1              |
| <b>C</b> | Garbage/Unpredictable | <b>D</b> | Compiler error |

**15.52** What is the output?

```
#include <iostream.h>
class A {
public :
    class B {
public:
        A *a ;
    } ;
    int i ;
    B b ;
    A():i(1){b.a = this;} ;
} ;
int main( ) {
    A a ;
    cout << a.b.a->b.a->i ;
}
```

```

    return 0 ;
}

```

<b>A</b>	0	<b>B</b>	1
<b>C</b>	Garbage/Unpredictable	<b>D</b>	Compiler error

**15.53** What is the output?

```

#include <iostream.h>
template <class T=int, int in=0>
    class A {
    public:
        int i ;
        A<T,in>():i(in){}
    } ;
int main( ) {
    cout << A<>().i ;
    return 0 ;
}

```

<b>A</b>	0	<b>B</b>	Garbage/Unpredictable
<b>C</b>	Compiler error		

**15.54** What is the output?

```

#include <iostream.h>
class A {
    public:
        virtual void show() = 0 ;
} ;
void A::show() {cout<<"A";}
class B: public A {
    public:
        void show() {cout<<"B";}
} ;
void show(A* a) {
    a->show() ;
}
int main( ) {
    B b ;
    show((A)&b) ;
    return 0 ;
}

```

<b>A</b>	A	<b>B</b>	B
<b>C</b>	Garbage/Unpredictable	<b>D</b>	Compiler error

**15.55** What is the output?

```

#include <iostream.h>

```

```

template <class T, int size>
int fn(T (&t)[size]) {
    return size ;
}
int main( ) {
    int arry[] = {0} ;
    cout << fn(array) ;
    return 0 ;
}

```

**A** 0**B** 1**C** Garbage/Unpredictable**D** Compiler error**15.56** What is the output?

```

#include <iostream.h>
void f(int) {
    cout << "Inside 'f ( int )' " << endl ;
}
void f(float f) {
    cout << (int)f << endl ;
}
int main( ) {
    f(0) ;
    return 0 ;
}

```

**A** 0**B** Inside 'f ( int )'**C** Compile time error**15.57** What is the output?

```

#include <iostream.h>
class A {
    int i ;
    public :
        A() { i = 1 ; }
        int geti() {return i;}
        int geti() const {return i+1;}
} ;
int main( ) {
    A a = (const A)A() ;
    cout << a.geti() ;
    return 0 ;
}

```

**A** 1**B** 2**C** Error

Answers 15									
01.	No*	02.	C*	03.	B*	04.	B*	05.	C*
06.	B	07.	A	08.	C	09.	B	10.	C*
11.	B	12.	C*	13.	C*	14.	A*	15.	A*
16.	C*	17.	A	18.	B	19.	C*	20.	A*
21.	D*	22.	A	23.	B+	24.	A	25.	B
26.	B	27.	B	28.	D*	29.	D*	30.	C*
31.	D*	32.	E	33.	A	34.	D	35.	A
36.	D	37.	A	38.	B	39.	B	40.	C
41.	C	42.	No*	43.	No*	44.	D	45.	E*
46.	E*	47.	C*	48.	B**	49.	C*	50.	B
51.	B	52.	B	53.	A	54.	D*	55.	B+
56.	B	57.	A						

Explanations 15	
01.	"{}" will generate an error.
02.	The statement "using ns::f ;" will generate an error because f(*int) is already declared in the scope.
03.	Non-member function "show()" cannot have "const" method qualifier. Only member functions may be "const". The case is same for volatile also.
04.	Global variables are initialized before executing main.
05.	Namespaces could be used for initializations only. Cannot execute code here.
10.	No matching function for call to "fn(int)". Example of calling the above function template : "fn<int,1>(2) ;"
12.	Initialization of non-const reference type "int &" from rvalue of type "int", while calling "fn<T>(int &)"
13.	No matching function for call to "fn(int)"
14.	The template "U fn(T)" is instantiated as "float fn(int)"
15.	Template is instantiated as "int fn(double)"
16.	Template cannot be instantiated because call is ambiguous. ie; Type of "T" cannot be determined.
19.	"A a()" means define a function "a()", which returns type of "A". It does not invoke the default constructor, as might be apparent.
20.	The object that is thrown is a copy
21.	"A::i" is not initialized.

23.	[In gcc, Ans: D]
28.	The constructor "A()" is private and hence cannot be called while instantiating objects of type "A". Hence compiler will complain when it encounters the line "A a ;"
29.	Ambiguity between constructors "A::A()" and "A::A(int)", while creating a new instance.
30.	Two instances of class A are created by calls "A a" and "A c(1)" respectively. "A b()" is definition of a function with name "b". Also static variable 'i' will be initialized only once and is global between all instances of the class.
31.	The static variable is not initialized. In this case, "i" will be interpreted to be declared as "extern"
42.	Definition of class "A" is incomplete type and cannot be initialized.
43.	There is no default constructor to initialize array element of type "A" in function main( )
45.	The destructors will be called in the order "a[1]", "a[0]"
46.	The destructors will be called in the order "a2", "a1"
47.	"delete this", which is called in the constructor de-allocates the object.
48.	"sqrt(-1)" returns "NaN". "NaN" has the property that it does not equal to any value, including itself. [In VC++, Ans: A] [In BCC, Ans: C]
49.	"a.i" not yet initialized.
54.	Class "A" is abstract and hence cannot create an instance of "A". Class 'A' is abstract because of 'A::show() = 0'.
55.	[In VC++, Ans: D]