

## Question No. 01

eof(), bad(), good(), clear() all are manipulators.

- A. True
- B. False (State Flags)

### Manipulators

جب ہم نے کوئی Formatting کرنی ہو تو اس کے لیے ہم Manipulators کا استعمال کرتے ہیں۔ ان کی دو اقسام ہیں۔

#### 1. Non Parameterized Manipulators

ان Manipulators کا کوئی Parameter نہیں ہوتا ہے۔

#### 2. Parameterized Manipulators

ان Manipulators کا کوئی Parameter ہوتا ہے۔

#### Example of Manipulators

oct, hex, dec

setw(4), setbase(8)

Lecture No. 36

## Question No. 02

Which kind of functions can access private member variables of a class?

- A. Friend functions of the class
- B. Private member functions of the class
- C. Public member functions of the class
- D. Normal functions of the class

### 1. Friend Function

#### Classes:

A class is a way of defining a user-defined data type. We have used data hiding in concept in class by making **Public and Private** data member of class.

However, data member of class access through defined functions (methods).

To Access the **Private Data Member** of class we use friend functions.

To Access the **Public Data Member** of class we use normal functions.

Lecture No. 27

## Question No. 03

The normal source of *cin* object is,

- A. File
- B. Disk
- C. Key Board
- D. RAM

### 1. Source and Destination

“Every stream has an associated source and a destination”.

Stream	Source	Destination
<i>cin</i>	Key Board	Variable

Stream	Source	Destination
<i>cout</i>	File	Screen

Lecture No. 35

## Question No. 04

Consider the following code segment. What will be the output of the following program?

```
int func (int);  
int num = 10;
```

```
int main() {  
int num;  
num = 5;  
cout << num;  
cout << func(num);  
}
```

```
int func (int x) {  
return num;  
}
```

- A. 5 , 5
- B. 5 , 10
- C. 10 , 5
- D. 10 , 10

### 1. Output of a Program

جب ہم نے کسی پروگرام کی Output بتانی ہو تو اس میں ہم COUT کو فور سے دیکھیں گے اور اس کے Code کو بھی ساتھ دیکھیں گے۔

اس میں پہلے ہم نے Simple Variable کو Print کیا ہے۔

اس کے بعد ہم نے Function کو Print کیا ہے۔

## Question No. 05

Every class contains \_\_\_\_\_.

- A. Constructor
- B. Destructor
- C. Both a constructor and a destructor**
- D. None of the given options

### 1. Constructor and Destructor

“Every class contains Constructor and Destructor”.

#### Constructor:

Constructor is a special function, called whenever we instantiate an object of a class.

#### Destructor:

A destructor is automatically called when an object is destroyed.

Lecture No. 27

## Question No. 06

Structured Query Language is used for \_\_\_\_\_.

- A. Databases Management**
- B. Networks
- C. Writing Operating System
- D. None of the given options

### 1. Structured Query Language

In the business world, most of the programming is database-oriented. In today's databases, like Oracle and SQL Server, a different kind of language is used. These are the languages that are called as structured query languages i.e. SQL. SQL, is so important that a standard has been developed for it.

Lecture No. 45

## Question No. 07

A Matrix can be composed of ints, floats or doubles as their elements. Best way is to handle this ,

- A. Write a separate class to handle each
- B. Use templates
- C. Use strings to store all types
- D. None of the given options

### 1. Templates

Template is a sketch to draw some shape or figure.

#### Matrix:

A Matrix can be composed of ints, floats or doubles as their elements.

Instead of handling these data types separately, we can write Matrix class as a template class and write code once for all native data types.

Lecture No. 43

## Question No. 08

\_\_\_\_\_ is a sketch to draw some shape or figure.

- A. Function
- B. Array
- C. Template
- D. Class

### 1. Templates

Template is a sketch to draw some shape or figure. There are two different types of templates in C++ language:

1. Function Templates
2. Class Templates

Lecture No. 41

## Question No. 09

"delete" operator is used to return memory to free store, which is allocated by the "new" operator.

- A. True
- B. False

### 1. Dynamic Memory Allocation

The operator to free the allocated memory using new operator is delete.

**new:**

**new operator** is used to allocate memory, it will be necessary to make use of 'delete' to deallocate the allocated memory.

**delete:**

The **delete operator** frees the allocated memory that is returned back to free store for usage ahead.

Lecture No. 28

## Question No. 10

In functions that return reference, use \_\_\_\_\_ variables.

- A. Local
- B. Global
- C. Global and Static
- D. Class

### 1. Function Return Reference

In functions that return reference, use global or static variables.

Lecture No. 30

## Question No. 11

Which function is used to allocate the multiple blocks of memory.

- A. **calloc function**
- B. **malloc function**
- C. **Both A and B**
- D. **None of the given options**

### 1. malloc and calloc functions

These are two functions

#### malloc Function:

**malloc function** is used to allocate a single block of memory space.

#### calloc function:

**calloc function** is used to allocate multiple blocks of memory space.

Lecture No. 24

## Question No. 12

A template function must have at least \_\_\_\_\_ generic data type

- A. **0**
- B. **1**
- C. **2**
- D. **3**

### 1. Template Function

The first line will be as template <generic data type>. This generic data type is written while using the class key word as template <class variable\_name>

The function arguments must contain at least **one generic data type**.

Lecture No. 41

## Question No. 13

For non-member operator function, object on left side of the operator may be

- A. Object of operator class
- B. Object of different class
- C. Built-in data type
- D. All of the given options

### 1. Non-member Operator Functions

When an operator function is implemented as a non-member function, the left-most operand may be an object of the operator's class, an object of a different class, or a **built-in type**.

Lecture No. 31

## Question No. 14

The static data members of a class are initialized \_\_\_\_\_.

- A. at file scope
- B. within class definition
- C. within member function
- D. within main function

### 1. Static data member of a class

When we are talking about the static data member of class its means that static data will be **created once** and **initialized once** for that class.

We initialize it **only once**. Initialization is done **at file scope** which means almost at the global scope. We **initialize it outside of the main**. The memory is allocated for these static members. **No other copy can be created** for them.

Lecture No. 38

## Question No. 15

Class is a user defined \_\_\_\_\_.

- A. value
- B. memory referee
- C. data type
- D. None of the given options

### 1. Class

“A class includes both data members as well as functions to manipulate that data”

These functions are called ‘member functions’. We also call them methods. A class is a ‘**user defined**’ data type. This way, we expand the language by creating a new data type. When we create variables of a class, a special name is used for them i.e. **Objects**.

“Instances of a class are called **objects**”

Lecture No. 26

## Question No. 16

The memory of automatic variable is created on \_\_\_\_\_.

- A. Heap
- B. Free storage
- C. Static storage
- D. Stack

### 1. Automatic Variable

The variables, declared and used inside the function are called **automatic variables**. They automatically come into being when the function is called. When the function finishes, these variables are destroyed.

They are automatic when the function is called, **memory is allocated normally on the stack** at the same time and used.

Lecture No. 38

## Question No. 17

new and delete are \_\_\_\_\_

- A. Functions
- B. Operator**
- C. Classes
- D. None of the given options

### 1. new and delete operator

The operator to free the allocated memory using new operator is delete.

#### new:

**new operator** is used to allocate memory, it will be necessary to make use of 'delete' to deallocate the allocated memory.

#### delete:

The **delete operator** frees the allocated memory that is returned back to free store for usage ahead.

Lecture No. 28

## Question No. 18

Which value is returned by the destructor of a class?

- A. A pointer to the class.
- B. An object of the class.
- C. A status code determining whether the class was destructed correct
- D. Destructors do not return a value.**

### 1. Constructor and Destructor

"Every class contains Constructor and Destructor".

#### Constructor:

Constructor is a special function, called whenever we instantiate an object of a class. **It return some value.**

#### Destructor:

A destructor is automatically called when an object is destroyed. **It does not return any value.**

Lecture No. 27

## Question No. 19

Which of the following is NOT a preprocessor directive?

- A. `#error`
- B. `#define`
- C. `#undef`
- D. `#line`

MOHSIN RAZA

MSBA, MBA, MIT, M.ed, B.ed, LLB

### 1. Preprocessor Directives

- `#include` file name
- `#define`
- `#undef`
- `#ifdef`
- `#ifndef`
- `#error`
- `#line`
- `#pragma`
- `#assert`

Lecture No. 23

## Question No. 20

The stream objects `cin` and `cout` are included in which header file?

- A. `iostream.h`
- B. `fstream.h`
- C. `istream.h`
- D. `ostream.h`

### 1. IOSTREAM

`cin` and `cout` stream is available in `iostream.h`.

## Question No. 21

\_\_\_\_\_ is called whenever we instantiate an object of a class..

- A. A Constructor
- B. A Destructor
- C. Both a constructor and a destructor
- D. None of the given options

### 1. Constructor and Destructor

“Every class contains Constructor and Destructor”.

#### Constructor:

Constructor is a special function, called whenever we instantiate an object of a class.

#### Destructor:

A destructor is automatically called when an object is destroyed.

Lecture No. 27

## Question No. 22

How many types of templates exist in C++.

- A. 1
- B. 2
- C. 3
- D. None of the given options

### 1. Templates

Template is a sketch to draw some shape or figure. There are two different types of templates in C++ language:

1. Function Templates
2. Class Templates

Lecture No. 41

## Question No. 23

The variable of a class is known as \_\_\_\_\_.

- A. value
- B. member
- C. object
- D. None of the given options

### 1. Class

“A class includes both data members as well as functions to manipulate that data”

These functions are called ‘member functions’. We also call them methods. A class is a ‘**user defined**’ data type. This way, we expand the language by creating a new data type. When we create variables of a class, a special name is used for them i.e. **Objects**.

“Instances of a class are called **objects**”

Lecture No. 26

## Question No. 24

malloc and calloc are \_\_\_\_\_.

- A. Functions
- B. Operator
- C. Classes
- D. None of the given options

### 1. malloc and calloc functions

These are two functions

#### malloc Function:

**malloc function** is used to allocate a single block of memory space.

#### calloc function:

**calloc function** is used to allocate multiple blocks of memory space.

Lecture No. 24

## Question No. 25

Consider the following code segment. What will be the output of following code?

```
int addValue (int *a){  
int b = (*a) + 2;  
return b ;  
}
```

```
main () {  
int x =6 ;  
cout << x << " , " ;  
cout << addValue(&x)  
cout << " , " ;  
cout << x ;  
}
```

A. 6 , 6 , 8

B. 6 , 8 , 8

C. 6 , 6 , 6

D. 6 , 8 , 6

### 1. Output of a Program

جب ہم نے کسی پروگرام کی Output بتانی ہو تو اس میں ہم cout کو غور سے دیکھیں گے اور اس کے Code کو بھی ساتھ دیکھیں گے۔

اس میں پہلے ہم نے Simple Variable کو Print کیا ہے۔

اس کے بعد ہم نے Function کو Print کیا ہے۔

اس کے بعد ہم نے Simple Variable کو Print کیا ہے۔

## Question No. 26

The statement `cin.get ( )`; is used to,

- A. Read a string from keyboard
- B. Read a character from keyboard
- C. Read a string from file
- D. Read a character from file

### 1. `cin.get ( )`;

`cin.get ( )`; is used read the character from the keyboard.

## Question No. 27

Overloaded `new` operator function takes parameter of type `size_t` and returns

- A. void (nothing)
- B. object pointer
- C. void pointer
- D. int pointer

### 1. Overloading of new and delete Operators

The overloaded `new` operator returns `void * pointer` when it is overloaded as non-member (global).

Lecture No. 33

## Question No. 28

C++ is a case-sensitive language

- A. True
- B. False

### 1. C++ Language

C Language is case sensitive so variable names `x` and `X` are two different variables

## Question No. 29

To include code from the library in the program, such as `iostream`, a directive would be called up using this command.

- A. `#include <iostream.h>`
- B. `include`
- C. `Iostream.h`
- D. `#include`

### 1. Preprocessor Directives

- `#include` directive is used to include any preprocessor directive into the C++ Program.

Lecture No. 23

## Question No. 30

\_\_\_\_\_ is used to trace the logic of the program and correct the logical errors.

- A. Linker
- B. Debugger
- C. Editor
- D. None of the given options

### 1. Debugger

#### Debugger:

Every programmer should be familiar with it. Debugger is used to debug the program i.e. to correct the logical errors.

## Question No. 31

The manipulator that take no parameter is known as:

- A. Manipulators
- B. State Flags
- C. Non Parameterized Manipulators
- D. Parameterized Manipulators

### Manipulators

جب ہم نے کوئی Formatting کرنی ہو تو اس کے لیے ہم Manipulators کا استعمال کرتے ہیں۔ ان کی دو اقسام ہیں۔

#### 1. Non Parameterized Manipulators

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#### 2. Parameterized Manipulators

ان Manipulators کا کوئی Parameter ہوتا ہے۔

#### Example of Manipulators

oct, hex, dec

setw(4), setbase (8)

Lecture No. 36

## Question No. 32

Friend function of a class is \_\_\_\_\_ .

- A. Member function
- B. Non-member function
- C. Private function
- D. Public function

### 1. Non-member function

Actually, this is just to this reason that we make those nonmember functions as friends to the classes whose **private data members** are required to be accessed.

Lecture No. 31

## Question No. 33

The normal source of *cout* object is,

- A. File
- B. Disk
- C. Key Board
- D. RAM

### 1. Source and Destination

“Every stream has an associated source and a destination”.

Stream	Source	Destination
<i>cin</i>	Key Board	Variable

Stream	Source	Destination
<i>cout</i>	File	Screen

Lecture No. 35

## Question No. 34

SQL stands for what \_\_\_\_\_.

- A. Simple Query Language
- B. Standards Query Language
- C. Structured Query Language
- D. None of the given options

### 1. Structured Query Language

In the business world, most of the programming is database-oriented. In today's databases, like Oracle and SQL Server, a different kind of language is used. These are the languages that are called as structured query languages i.e. SQL. SQL, is so important that a standard has been developed for it.

Lecture No. 45

## Question No. 35

"new" operator is used to allocate the dynamic memory.

- A. True
- B. False

### 1. Dynamic Memory Allocation

The operator to free the allocated memory using new operator is delete.

**new:**

**new operator** is used to allocate memory, it will be necessary to make use of 'delete' to deallocate the allocated memory.

**delete:**

The **delete operator** frees the allocated memory that is returned back to free store for usage ahead.

Lecture No. 28

## Question No. 36

We initialize the static data members of a class \_\_\_\_\_ at time .

- A. 0 time
- B. 1 time
- C. 2 time
- D. 3 time

### 1. Static data member of a class

When we are talking about the static data member of class its means that static data will be **created once** and **initialized once** for that class.

We initialize it **only once**. Initialization is done **at file scope** which means almost at the global scope. We **initialize it outside of the main**. The memory is allocated for these static members. **No other copy can be created** for them.

Lecture No. 38

## Question No. 37

A template function must have only generic data types.

- A. True
- B. False

### 1. Template Function

The first line will be as `template <generic data type>`. This generic data type is written while using the class key word as `template <class variable_name>`

The function arguments must contain at least **one generic data type**.

Lecture No. 41

## Question No. 38

Template class can not have static variables.

- A. True
- B. False

### 1. Template Class

Template Class has both *static* and *dynamic* variable.

Lecture No. 41

## Question No. 39

Classes defined inside other classes are called \_\_\_\_\_ classes

- A. looped
- B. overloaded
- C. **nested**
- D. None of the given options

### 1. Classes inside Classes

In C language, structures can be defined inside structures, Similarly in C++, we can have structures or classes defined inside classes. Classes defined within other classes are called *nested classes*.

Lecture No. 41

## Question No. 40

New and Delete are also used with \_\_\_\_\_ and data types as well.

- A. **Class, Objects**
- B. Structures, Pointers
- C. Both A and B
- D. None of the given options

### 1. new and delete operator

The operator to free the allocated memory using *new* operator is *delete*. Both are used for class and objects.

Lecture No. 28

## Question No. 41

\*.doc is \_\_\_\_\_ by type.

- A. Sequential File
- B. Random Access File**
- C. Data File
- D. None of the given options

### 1. \* and Files Access

When a "\*" is place any file name and after that an extension is place than this is random access file.

Lecture No. 28

## Question No. 42

The return type of operator function must always be void.

- A. True
- B. False**

### 1. Return Type

The return type of a function is some that that is a variable or list or arguments.

## Question No. 43

What does (*\*this*) represents?

- A. The current function of the class
- B. The current pointer of the class
- C. A value of the data member
- D. The current object of the class

1. \* this

This *\*this* is used to point the current object of the class.

## Question No. 44

When we do dynamic memory allocation in the constructor of a class, then it is necessary to provide a destructor.

- A. True
- B. False

## Question No. 45

Which function is used to allocate the single block of memory.

- A. calloc function
- B. malloc function
- C. Both A and B
- D. None of the given options

### 1. malloc and calloc functions

These are two functions

#### malloc Function:

**malloc function** is used to allocate a single block of memory space.

#### calloc function:

**calloc function** is used to allocate multiple blocks of memory space.

Lecture No. 24

## Question No. 46

When variables is declared and used inside the function are called \_\_\_\_\_.

- A. Automatic Variable
- B. Simple Variable
- C. Normal Variable
- D. Variable

### 1. Automatic Variable

The variables, declared and used inside the function are called **automatic variables**. They automatically come into being when the function is called. When the function finishes, these variables are destroyed.

They are automatic when the function is called, **memory is allocated normally on the stack** at the same time and used.

Lecture No. 38

## Question No. 47

A class include \_\_\_\_\_.

- A. data member
- B. function
- C. Both A and B
- D. None of the given options

### 1. Class

“A class includes both data members as well as functions to manipulate that data”

These functions are called ‘member functions’. We also call them methods. A class is a ‘**user defined**’ data type. This way, we expand the language by creating a new data type. When we create variables of a class, a special name is used for them i.e. **Objects**.

“Instances of a class are called **objects**”

Lecture No. 26

## Question No. 48

\_\_\_\_\_ is automatically called when an object is destroyed.

- A. A Constructor
- B. A Destructor
- C. Both a constructor and a destructor
- D. None of the given options

### 1. Constructor and Destructor

“Every class contains Constructor and Destructor”.

#### Constructor:

Constructor is a special function, called whenever we instantiate an object of a class.

#### Destructor:

A destructor is automatically called when an object is destroyed.

Lecture No. 27

## Question No. 49

Which kind of functions can access public member variables of a class?

- A. Friend functions of the class
- B. Private member functions of the class
- C. Public member functions of the class
- D. Normal functions of the class

### 1. Friend Function

#### Classes:

A class is a way of defining a user-defined data type. We have used data hiding in concept in class by making *Public and Private* data member of class.

However, data member of class access through defined functions (methods).

To Access the *Private Data Member* of class we use friend functions.

To Access the *Public Data Member* of class we use normal functions.

Lecture No. 27

## Question No. 50

The manipulator that take parameter is known as:

- A. Manipulators
- B. State Flags
- C. Non Parameterized Manipulators
- D. Parameterized Manipulators

### Manipulators

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#### Example of Manipulators

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setw(4), setbase (8)

Lecture No. 36