

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA**

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech.

SEM: III - THEORY EXAMINATION (2021 - 2022) (ONLINE)

Subject: Object Oriented Programming

Time: 02:00 Hours

Max. Marks: 100

**General Instructions:**

1. *All questions are compulsory. It comprises of two Sections A and B.*
  - *Section A - Question No- 1 has 35 objective type questions carrying 2 marks each.*
  - *Section B - Question No- 2 has 12 subjective type questions carrying 3 marks each. You have to attempt any 10 out of 12 question.*
  - *No sheet should be left blank. Any written material after a Blank sheet will not be evaluated/checked.*

**SECTION A**

35 x 2 = 70

**1. Attempt ALL parts:-**

- |       |   |   |
|-------|---|---|
| 1.1.a | Which of the following statement is correct for switch controlling expression?  | 1 |
|       | (a) Only int can be used in “switch” control expression.<br>(b) Both int and char can be used in “switch” control expression.<br>(c) All types i.e. int, char and float can be used in “switch” control expression.<br>(d) “switch” control expression can be empty as well |   |
| 1.1.b | In a C expression, how is a logical AND represented?  | 1 |
|       | (a) AND<br>(b) \$\$<br>(c)   <br>(d) &&   |   |
| 1.1.c | Which of the following is not a keyword in c?   | 1 |
|       | (a) extern<br>(b) const<br>(c) register<br>(d) All of these are keywords  |   |
| 1.1.d | Part of algorithm which is repeated for fixed number of times is classified as  | 1 |
|       | (a) iteration<br>(b) selection<br>(c) sequence<br>(d) reverse action  |   |
| 1.1.e | What will be the output of the following code<br><pre>#include void main() {   int i=0;   do   {     printf(“while vs do-while”);   } while(i==0);   printf(“out of loop”); }</pre>   | 1 |

- (a) while vs do-while' once  
 (b) 'Out of loop' infinite times  
 (c) Both 'while vs do-while' and 'Out of loop' once  
 (d) 'while vs do-while' infinite times
- 1.1.f Choose a syntax for C Ternary operator from the list. 1  
 (a) condition ? expression1 : expression2;  
 (b) condition : expression1 ? expression2;  
 (c) condition ? expression1 < expression2;  
 (d) condition < expression1 ? expression2;
- 1.1.g What is the result of 4<<2 ? 1  
 (a) 4  
 (b) 8  
 (c) 16  
 (d) 0
- 1.2.a An inline function is expanded during \_\_\_\_\_ 1  
 (a) compile-time  
 (b) run-time  
 (c) never expanded  
 (d) end of the program
- 1.2.b What will be the output of the following C++ code? 1  

```
#include
using namespace std;
void car{
cout << "Audi R8";
}
int main() {
car();

return 0;
}
```

 (a) Audi R8  
 (b) Audi R8Audi R8  
 (c) compile time error  
 (d) runtime error
- 1.2.c Which of the following is the default return value of functions in C++? 1  
 (a) int  
 (b) char  
 (c) float  
 (d) void
- 1.2.d What are mandatory parts in the function declaration? 1  
 (a) return type, function name  
 (b) return type, function name, parameters  
 (c) parameters, function name  
 (d) parameters, variables
- 1.2.e For accessing a global variable when a local variable of the same name is in scope, C++ provides a 1  
 (a) Function for accessing  
 (b) An operator for accessing  
 (c) A class for accessing

	(d) None of them	
1.2.f	Which from the following is used for invoking a function? (a) call-by-reference (b) call-by-value (c) call-by-functions (d) Both A and B	1
1.2.g	Unary scope resolution operator is denoted by (a) ! ! (b) % % (c) : (d) ::	1
1.3.a	Which of the following type of class allows only one object of it to be created? (a) Virtual class (b) Abstract class (c) Singleton class (d) Friend class	1
1.3.b	Which language among the following supports classes, but does not support the concept of Polymorphism? (a) C++ programming language (b) Java programming language (c) Ada programming language (d) C# programming language	1
1.3.c	_____ was the first language to be developed as a purely object-oriented programming language? (a) Smalltalk (b) C++ (c) PHP (d) Java	1
1.3.d	Which of the following is not a main feature of OOPs? (a) Encapsulation (b) Polymorphism (c) Exception (d) Abstraction	1
1.3.e	Which among the following operators can be used to show Polymorphism in CPP? (a) Overloading << (b) Overloading && (c) Overloading    (d) Overloading +=	1
1.3.f	Which superclass member won't be accessible to the subclass? (a) Public member (b) Protected member (c) Private member (d) All of the mentioned	1
1.3.g	Who developed the first object-oriented programming language? (a) Adele Goldberg (b) Dennis Ritchie	1

- (c) Alan Kay  
(d) Andrea Ferro
- 1.4.a The pointer to a function is known as ..... function. 1  
(a) forward  
(b) pointer  
(c) callback  
(d) backward
- 1.4.b Which constructor will be called first from the classes involved in single inheritance from object of derived class? 1  
(a) Base class constructor  
(b) Derived class constructor  
(c) Both class constructors at a time  
(d) Runtime error
- 1.4.c Which is used to handle the exceptions in c++? 1  
(a) catch handler  
(b) handler  
(c) exception handler  
(d) throw
- 1.4.d How does C++ compiler differs between overloaded postfix and prefix operators? 1  
(a) C++ doesn't allow both operators to be overloaded in a class  
(b) A postfix ++ has a dummy parameter  
(c) A prefix ++ has a dummy parameter  
(d) By making prefix ++ as a global function and postfix as a member function.
- 1.4.e If single inheritance is used, program will contain \_\_\_\_\_ 1  
(a) At least 2 classes  
(b) At most 2 classes  
(c) Exactly 2 classes  
(d) At most 4 classes
- 1.4.f Which language doesn't support single level inheritance? 1  
(a) Java  
(b) C++  
(c) Kotlin  
(d) All languages support it
- 1.4.g Which of the following operators cannot be overloaded 1  
(a) . (Member Access or Dot operator)  
(b) ?: (Ternary or Conditional Operator )  
(c) :: (Scope Resolution Operator)  
(d) All of the above
- 1.5.a Streams that will be performing both input and output operations must be declared as class \_\_\_\_\_ . 1  
(a) iostream  
(b) fstream  
(c) stdstream  
(d) Stdiostream
- 1.5.b Attributes are the data that represents characteristics of interest about an object. 1  
(a) TRUE

	(b) FALSE	
1.5.c	Which of the following is a C++ class? (a) cin (b) >> (c) iostream (d) read()	1
1.5.d	Which type they considered Activity diagram, use case diagram, collaboration diagram, and sequence diagram? (a) non-behavioral (b) non-structural (c) structural (d) behavioral	1
1.5.e	A class is divided into which of these compartments? (a) Name Compartment (b) Attribute Compartment (c) Operation Compartment (d) All of the mentioned	1
1.5.f	A Class consists of which of these abstractions? (a) Set of the objects (b) Operations (c) Attributes (d) All of the mentioned	1
1.5.g	A system consists of: (a) A set of objects (b) The attributes of objects (c) The relationships between objects (d) All of the above	1

#### SECTION B

10 X 3 = 30

2. Answer any TEN of the following:-

2.1.a	Evaluate the expression a&b when a = 121 and b = -15	2
2.1.b	What do you understand by mixed operands?	2
2.2.a	Define Function definition, declaration and function calling.	2
2.2.b	Comment of function calling with example.	2
2.2.c	Define call by value with example.	2
2.3.a	What is the main difference between overloading and overriding?	2
2.3.b	What is operator overloading?	2
2.3.c	What is an Inline function?	2
2.4.a	What is try-catch block ?	2
2.4.b	What is throws clause ?	2
2.5.a	Explain Behavioral Modeling.	2
2.5.b	Explain the purpose of a Sequence Diagram.	2