BRAINWARE UNIVERSITY

Term End Examination 2024-2025
Programme – B.Tech.(RA)-2021/B.Tech.(RA)-2022/B.Tech.(RA)-2023
Course Name – Object oriented programming using C++ and Java/Object Oriented Programming Using C++ and Java
Course Code - ESCR301
(Semester III)

Full Marks : 60 **Time : 2:30 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question) 1 x 15=15

1. *Choose the correct alternative from the following :*

(i) Select from the following that is a characteristic of an object.
a) Behavior b) Class
c) Method d) All of the above

(ii) Identify the main purpose of abstraction in OOP.
a) Simplify complex systems b) Increase code size
c) Hide syntax d) Improve performance

(iii) Select from the following that is a valid C++ program structure.
a) Preprocessor directives b) Main function
c) Class definitions d) All of the above

(iv) Select the type of statement that is used to transfer control unconditionally.
a) Jump statement b) Control statement
c) Declaration statement d) Expression statement

(v) Select from the following that the new operator can do in C++.
a) Allocate memory b) Deallocate memory
c) Define a function d) Create a constant

(vi) Indicate from the following that is not a valid function overloading.
a) Different types b) Different names
c) Different number of parameters d) Different return types

(vii) Choose operator that is typically overloaded to manage dynamic memory allocation in C++.
a) [] b) new
c) delete d) Both B and C

(viii) Choose operator that cannot be overloaded in C++.
a) + b) ::
c) typeid d) dynamic_cast

(ix) Choose the main purpose of the super() method in inheritance.

a) To call the constructor of the superclass. b) To call the constructor of the subclass.
c) To initialize the object. d) To create an abstract class.

(x) Indicate the use of the throws keyword in Java.

a) To throw an exception b) To declare an exception
c) To catch an exception d) To suppress an exception

(xi) Select from the following that is an example of a checked exception.

a) NullPointerException b) ArrayIndexOutOfBoundsException
c) FileNotFoundException d) ArithmeticException

(xii) Select a method that is used to get a detailed message of an exception in Java.

a) getMessage() b) toString()
c) printStackTrace() d) getCause()

(xiii) Tell the advantage of multi-threading.

a) Reduced complexity b) Simplified code
c) Efficient CPU utilization d) Reduced memory usage

(xiv) Choose the default value of a boolean variable in Java.

a) TRUE b) FALSE
c) 0 d) null

(xv) Choose from the following that is used to create an object in Java.

a) class b) new
c) constructor d) method

Group-B

(Short Answer Type Questions) 3 x 5=15

2. Define High-Level language with example. (3)
3. Describe function overloading in C++. (3)

4. Explain how exception handling works in Java when using custom exceptions. How does a try-catch block handle custom exceptions? (3)

5. Write and explain the basic code structure of Java. (3)

6. Write a java program to display fibonacci Series Using " for " Loop. (3)

OR

Write a program to find the largest element in an array. (3)

Group-C

(Long Answer Type Questions) 5 x 6=30

7. Explain the basics of multi-threading, thread life cycle, and thread synchronization in Java. (5)

8. Write a program that demonstrates the casting of one variable to another using the implicit type casting in C++. (5)

9. Illustrate a program that infer the concept of function overriding. (5)

10. Describe identifiers and give examples. (5)

11. How does class relate to objects? (5)

12. Explain object oriented programming. (5)

OR

Explain procedural oriented programming. (5)

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