

Dr. Babasaheb Ambedkar Open University
Term End Examination February – 2026

Course	: BCA	Date	: 21-02-2026
Subject Code	: BCA-404	Time	: 03:00pm to 05.15pm
Subject Name	: Client Server Architecture and Interfaces (C#)	Duration	: 02.15 Hours
		Max. Marks	: 70

Section A

Answer the following (Attempt any three)

(30)

1. Define Client/Server Architecture. Explain the evolution from Single-tier to N-tier architecture with its benefits.
2. What is Remote Procedure Call (RPC)? Explain the working mechanism of RPC and its merits in distributed computing.
3. Describe the Common Language Runtime (CLR) architecture in the .NET framework and its key features.
4. Explain the concept of Object Linking and Embedding (OLE) and how it facilitates data sharing between applications.
5. What is ASP.NET? Explain the steps involved in building site navigation and adding content pages in a web application.

Section B

Answer the following (Attempt any four)

(20)

1. Discuss the characteristics and functions of the Security Manager in the .NET environment.
2. Explain the features of Client Services and Server Side Services in a typical C/S model.
3. What are the various Productivity Measures used in System Development environments?
4. Explain the role and features of the Common Object Request Broker Architecture (CORBA).
5. Describe the concept of Managed Code and its advantages in C# programming.
6. Discuss the issues related to Performance Network Management in client-server systems.

Section C

Part – A (Multiple Choice Questions)

(10)

- 1 Which of the following is a core component of the .NET Framework?

A. JVM
B. CLR
C. JDK
D. JRE

- 2 RPC stands for:
- A. Remote Process Control
 - B. Remote Procedure Call
 - C. Real Protocol Communication
 - D. Register Power Code
- 3 Which architecture involves a central server and multiple clients?
- A. Peer-to-Peer
 - B. Client/Server
 - C. Standalone
 - D. Isolated
- 4 In C#, which namespace is used for input/output operations?
- A. System.Data
 - B. System.IO
 - C. System.Web
 - D. System.Net
- 5 Which technology allows an object to be embedded into another document?
- A. RPC
 - B. OLE
 - C. CORBA
 - D. SQL
- 6 The process of converting source code into an intermediate language is done by:
- A. Linker
 - B. Compiler
 - C. Loader
 - D. Interpreter
- 7 Which of the following is a feature of ASP.NET?
- A. Master Pages
 - B. Site Navigation
 - C. Authentication
 - D. All of the above
- 8 CORBA uses which component to facilitate communication between objects?
- A. Middleware
 - B. ORB (Object Request Broker)
 - C. Stub
 - D. Skeleton

- 9 Which service is responsible for managing memory automatically in .NET?
- A. Security Manager
 - B. Garbage Collector
 - C. Thread Manager
 - D. Class Loader
- 10 A system that provides resources and services to other computers is called a:
- A. Client
 - B. Server
 - C. Terminal
 - D. Peripheral

Part – B (Do as Directed)

(10)

State whether the following statements are true or false

- 1 Managed code is executed by the Common Language Runtime (CLR).
- 2 Single-tier architecture is highly scalable compared to N-tier architecture.
- 3 C# is an object-oriented programming language developed by Microsoft.
- 4 Remote Procedure Call (RPC) allows a program to execute a procedure on a remote server.
- 5 Authentication is the process of verifying the identity of a user.
- 6 GUI stands for Grapical User Interface.
- 7 The .NET framework supports multiple programming languages.
- 8 Client side services never interact with the user interface.
- 9 WCF stands for Windows Communication Foundation.
- 10 Security Manager in .NET only handles file permissions.
