

(7 pages)

Reg. No. : .....

**Code No.: 8386**

**Sub. Code: WCAM 31**

M.C.A. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2024.

Third Semester

Computer Applications – Core

DOT NET TECHNOLOGIES

(For those who joined in July 2023 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (15 × 1 = 15 marks)

Answer ALL questions.

Choose the correct answer:

1. Which of the following is a branching statement in C#?  
(a) for (b) if  
(c) while (d) do
2. What is the entry point of a C# console application?  
(a) Main method (b) Start method  
(c) Run method (d) Init method

3. What is a variable in C#?  
(a) A fixed value that cannot change  
(b) A storage location with a name and type that can hold data  
(c) A function that performs calculations  
(d) A graphical element in an application
4. Which of the following is an example of explicit type conversion in C#?  
(a) `int number = 5;`  
(b) `double num = (double)number;`  
(c) `var name = "John";`  
(d) `float temp = 98.6 f;`
5. Which tool is commonly used for debugging in Visual Studio?  
(a) Error Finder (b) Debugging Toolbar  
(c) Breakpoints (d) Code Scanner
6. What is the purpose of using a try-catch block in C#?  
(a) To iterate over a collection  
(b) To handle exceptions and errors during runtime  
(c) To declare variables  
(d) To perform type conversion

Page 2

**Code No. : 8386**





7. What is a constructor in C#?
- (a) A method called when an object is created to initialize it
  - (b) A method called when an object is destroyed
  - (c) A variable that holds a constant value
  - (d) A loop that iterates over a collection
8. Which of the following is true about interfaces in C#?
- (a) Interfaces can have method implementations
  - (b) Interfaces cannot be instantiated directly
  - (c) Interfaces can contain fields
  - (d) Interfaces are used to create objects
9. What is a partial class in C#?
- (a) A class definition that can be split into
  - (b) A class that cannot be inherited multiple files
  - (c) A class that has only static members
  - (d) A class with no methods
10. What is ASP.NET used for?
- (a) To build web applications and services
  - (b) To manage hardware resources
  - (c) To create desktop applications
  - (d) To design graphic animations

11. What is the purpose of the File class in .NET?
- (a) To perform input and output operations on files
  - (b) To manage hardware resources
  - (c) To design user interfaces
  - (d) To write SQL queries
12. What is the purpose of monitoring the file system?
- (a) To track changes to files and directories
  - (b) To design web pages in real-time
  - (c) To perform arithmetic operations
  - (d) To manage network connections
13. What is LINQ to XML used for?
- (a) To query and manipulate XML data
  - (b) To design user interfaces using LINQ syntax
  - (c) To manage network connections
  - (d) To create desktop applications
14. Which syntax is used in LINQ for query expressions?
- (a) Query syntax
  - (b) SQL syntax
  - (c) HTML syntax
  - (d) JavaScript syntax





15. Which of the following is a common element of Windows Store apps?

- (a) Tile-based user interfaces
- (b) SQL queries
- (c) Command-line interfaces
- (d) XML manipulation

PART B — ( $5 \times 4 = 20$  marks)

Answer ALL questions, choosing either (a) or (b).  
Each answer should not exceed 250 words.

16. (a) Describe the role of Boolean logic in C# and its uses.

Or

(b) Discuss the different types of loops available in C# and provide examples.

17. (a) Explain complex variable types in C# with examples.

Or

(b) Explain about debugging in Visual Studio.

18. (a) Write a short note on constructors and destructors in C#.

Or

(b) Distinguish between shallow copying and deep Copying in C# with an example.

Page 5      Code No. : 8386

19. (a) Explain how to convert XML data to JSON format in C# and list its methods or libraries.

Or

(b) Briefly explain the file streams in C# and its purpose.

20. (a) Discuss about LINQ to XML and its usage

Or

(b) Explain detail about the Entity Framework.

PART C — ( $5 \times 8 = 40$  marks)

Answer ALL questions by choosing either (a) or (b).  
Each answer should not exceed 600 words.

21. (a) Describe variable declaration and initialization in C# with examples.

Or

(b) Discuss the use of expressions in C# with examples.

22. (a) Define and explain function and function overloading in C# and provide examples.

Or

(b) Explain the principles of Object-Oriented Programming (OOP) in C# with examples.

Page 6      Code No. : 8386



23. (a) Describe about the concept of defining classes in C# with its main components and example.

Or

- (b) Distinguish between interfaces and abstract classes in C# with an example.

24. (a) Compare and contrast .NET Framework, .NET Standard and .NET Core with its roles.

Or

- (b) Describe the key consideration, steps and process for building and packaging a .NET Standard library.

25. (a) Elaborate the key concepts and components of Windows Universal Apps.

Or

- (b) Explain how to perform ordering and grouping in LINQ and give examples.

