

(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

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 × 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 × 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.