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| **S.NO:1** | **TOPICS:SQL SERVER** |
| 1 | Understanding Data,Database and Relational Database ? |
| 2 | Understanding Relational Database Management Systems and their usages? |
| 3 | Understanding Relational Operators like Restrict, Project, Product, Union, Intersect, Difference, Join and Divide . |
| 4 | Understanding Keys in RDBMS like Candidate Key, Alternate Key, Primary Key, Foreign key and Composite key. |
| 5 | Explaining Normalizing and Denormalizing Data ? |
| 6 | Explaining Various Normalizing forms like 1NF , 2NF , 3NF and BCNF . |
| 7 | Introducing SQL Server ? |
| 8 | Explaining Application Architecture like Single Tier, Two- Tier , Three- Tier and N-Tier . |
| 9 | Explaining SQL ? Types of SQL Statements like DDL, DML, DQL and DCL . |
| 10 | Explaining Sql Server Management Studio and its working ? |
| 11 | Explaining Types of Data like Structured , Semi structured and Unstructured ? |
| 12 | Identifying Data types ? |
| 13 | Working with DQL statements with select command. |
| 14 | Selecting Retrieving attributes e.g. columns from table ? |
| 15 | Selecting the columns with customizing the display means changing the name of column for display ? |
| 16 | Performing Calculations on columns of tables with arithmetic operations ? |
| 17 | Retrieving selected rows with where clause and comparison operators like =, < . >= etc? |
| 18 | Retrieving records with logical operators ? And, OR , NOT ? |
| 19 | Retrieving Records with range operators like between and not between |
| 20 | Retrieving records with in and not in operators . |
| 21 | Retrieving Records that match a pattern with like keyword and wildcards . |
| 22 | Retrieving records that contain null values. |
| 23 | Retrieving records to be displayed in a sequence by using order by . |
| 24 | Retrieving records from the top of a table by using top keywords ? |
| 25 | Retrieving records from a particular position by using offset-fetch clause ? |
| 26 | Retrieving records without duplication of values by using distinct keyword ? |
| 27 | Working with string functions. |
| 28 | Working with Conversion functions |
| 29 | Working with Date Functions. |
| 30 | Working with Mathematical functions. |
| 31 | Working with Aggregate functions. |
| 32 | Grouping data by using group by and having ? |
| 33 | Querying data by using joins . |
| 34 | Working with inner joins ? |
| 35 | Working with outer joins ? Like left outer, right outer and full outer joins ? |
| 36 | Working with cross joins. |
| 37 | Working with self joins . |
| 38 | Working with Equi joins . |
| 39 | Working with Subqueries ? |
| 40 | Using in and exists keywords? |
| 41 | Working with Modified Comparison operators? Like > ALL , > ANY , =ANY etc . |
| 42 | Combining result sets by using Union , Except and Intersect operators. |
| 43 | Explaining Various system databases like master, tempdb, model and msdb . |
| 44 | Explaining the database files like primary,secondary and transaction log files. |
| 45 | Creating, altering, renaming and droping User-defined database. |
| 46 | Creating, altering, renaming and droping user defined tables as well as inserting rows and inserting partial data in it. |
| 47 | Working with identity property in tables. |
| 48 | Implementing Data integrity with Applying Constraints, Applying rules and creating user-defined data types. |
| 49 | Creating Synonyms of tables. |
| 50 | Copying table into new table. |
| 51 | Updating and deleting existing rows. |
| 52 | Difference between delete, drop and truncate . |
| 53 | Implementing Indexes e.g. clustered and nonclusterd indexes. |
| 54 | Understanding Views , creating , altering and droping views and understanding rules for views. |
| 55 | Understanding batches and variables and displaying user defined message. |
| 56 | Working with conditional constructs like if..else, case and while statements. |
| 57 | Error and exceptions handling by using Try-Catch. |
| 58 | Creating Stored Procedures and guidelines for it. |
| 59 | Executing stored procedure. |
| 60 | Altering and dropping stored procedure. |
| 61 | Creating paramterized stored procedure. |
| 62 | Returning values from stored procedure. |
| 63 | calling procedure from other procedure. |
| 64 | Understanding system procedures. |
| 65 | Creating Functions e.g. scalar and table valued functions. |
| 66 | Difference between functions and procedures. |
| 67 | Working with triggers and types of triggers . |
| 68 | Understanding transactions and its features like ACID. |

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| **Sno.2** | **Topic:ASP.NET** |
| **1** | What is web application ? What is Client and Server ? |
| **2** | What is ASP.NET Framework and its history ? What is IIS ? |
| **3** | Static and Dynamic Web Pages? |
| **4** | What is client side and server side scripting ? |
| **5** | Explain the Working of ASP.NET Application ? |
| **6** | Features of ASP.NET ? |
| **7** | Directories used in ASP.NET Web Applications? |
| **8** | Files Used in ASP.NET Web Applications ? |
| **9** | Single-File and Code-behind Page Model ? |
| **10** | Page Events ? Web page code of aspx and aspx.cs ? AutoEventWireUp property of Page tag? |
| **11** | Form tag and it's methods like get and post ? Form action property ? |
| **12** | What is posting ? What is Postback ? What is AutoPostBack ? |
| **13** | What is Page Life Cycle ? What is Life cycle Events ? |
| **14** | Implementing all HTML Controls ? |
| **15** | Implementing ASP Standard Controls ? |
| **16** | Exploring Default and Non Default Events ? |
| **17** | Making Web User Controls ? |
| **18** | What is IsPostBack ? |
| **19** | Styles implementation by using CSS? |
| **20** | Implementing Client Side Scripting by using Javascript? |
| **21** | Working with Master Pages and nested Master Pages ? |
| **22** | Using Navigation controls with site map ? |
| **23** | Redirecting user to any other web page with values ? |
| **24** | Using HyperLinks ? |
| **25** | Using Cross Page Postback? |
| **26** | using Response.Redirect and Server.Transfer Methods ? |
| **27** | Getting Control Information from the Source Page in the Same Application? |
| **28** | Managing state in web application ? |
| **29** | Client side state management ? |
| **30** | Server side state management ? |
| **31** | Working with Data controls ? |
| **32** | ADO.NET connectivity ?Global Connection ? SqlConnection , SqlCommand ,SqlDatareader etc for DML working |
| **33** | Using SQLDataSource? |
| **34** | Inserting , Updating and Deleting using SqlDataSource ? |
| **35** | Using Rich Controls like GridView , FormView and DetailsView. |
| **36** | Data Biding ? |
| **37** | Error Handling by using try catch , Application level handling , using web.config level error handling ? |
| **38** | Using WebParts Controls ? |
| **39** | Working with AJAX controls and toolkit ? |
| **40** | Security implementation in Web Application ? |
| **41** | Authentication and Authorization ? |
| **42** | Exploring WAT ? |
| **43** | Exploring Validation Controls ? |
| **44** | Exploring Login Controls ? |

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| **Sno.3** | **Topic:c#** |
| **1** | About C# Programming Language like history and type and purpose and features? What is OOPS? |
| **2** | What is .NET Framework ? What are compilers ? Difference between Compiler and Interpreter ? |
| **3** | Classes in C# ? Class name Conventions ? Types of classes like partial , non static and static ? |
| **4** | Escape Sequences? |
| **5** | Basic Structure of C# Program like Main( ) Method usage ? |
| **6** | What are namespaces ? |
| **7** | What is the difference between classes and namespaces? |
| **8** | What is the process of compiling of C# source code ? |
| **9** | What is MSIL? |
| **10** | What is JIT Compiler ? |
| **11** | What is Assembly ? Types of Assembly ? |
| **12** | What is Object ? |
| **13** | What is the base class of all classes in the .NET Framework? |
| **14** | Explain the .NET Architecture ? |
| **15** | Latest .NET Framework and Latest C# languages ? How many .Net based languages available ? |
| **16** | What are Variables? Variable Naming Conventions ? Declaring and Initializing Variables ? |
| **17** | What are Data Types ? Types of Data types ? |
| **18** | Difference between Value type and reference type data types? |
| **19** | Difference between dynamic and var type variables ? |
| **20** | Difference between variables and constants ? |
| **21** | Difference between constants and read only variables? |
| **22** | Console.ReadLine() and Console.WriteLine() Functionality ? |
| **23** | What is using Keyword ? |
| **24** | What are comments in C# ? Types of Comments ? |
| **25** | Instantiating Class and its process? |
| **26** | What are operators and Operands ? Types of Operators ? |
| **27** | Explain Arithmetic , Arithmetic assignment , Unary , Comparison and Logical Operators ? |
| **28** | Explaining Conditional Constructs like if-else , nested if-else and switch case ? |
| **29** | Explain Loops like While , do while , For loop and foreach loop ? |
| **30** | Goto , break , return and continue statements ? |
| **31** | What are the class members ? |
| **32** | What are access specifiers ? How may access specifiers are there ? |
| **33** | What are methods and convention for methods naming? |
| **34** | Explain the importance of Parameterized Methods ? |
| **35** | Explain call by value , call by reference and call by output ? |
| **36** | Explain Optional and Named Arguments ? |
| **37** | Explain Recursion ? And it's advantages? |
| **38** | Explain static attributes,static methods and static class? |
| **39** | Explaining Constructors ? Types of Constructors like static,private and instance ? Constructors with parameter ? |
| **40** | Explaining Destructors ? |
| **41** | Explain the Garbage Collection and it's Process and working ? |
| **42** | Explain the Finalize() and Dispose() methods in Garbage Collection class? |
| **43** | Explain Properties in C#? |
| **44** | Explaining Structure ? Difference between Structure and Class? |
| **45** | Explaining Enumerations and it's usage with examples? |
| **46** | Explaining Array and it's Implementation in one dimensional and two dimensional ? Copying array ? |
| **47** | Explain the Param Arrays and Jagged Array? Passing array as parameters ? Passing array by ref keyword ? |
| **48** | Explaining Array Class with it's properties like Length,Rank etc and also methods like Sort, Clear and GetLength ? |
| **49** | Explain the Collections ? |
| **50** | Explain the Generic Class in C# ? Advantage of Generic Class? |
| **51** | Explain the types of Collections like generic and non generic ? |
| **52** | Explain the working of ArrayList , List,Stack,Queue and Dictionary collections with generic and non generic ? |
| **53** | Explain Inheritance and implementation ? |
| **54** | Explain abstract class and abstract methods ? |
| **55** | Explain the sealed classes? |
| **56** | Explain the interfaces ? |
| **57** | Explain base class initialization ? |
| **58** | What is Polymorphism? |
| **59** | Implementing function overloading and constructor overloading ? |
| **60** | Implementing function overriding ? |
| **61** | Reading and writing the text file by using File class? |
| **62** | Reading and Writing the text files by using FileStream class,StreamReader and StreamWriter. |
| **63** | Creating Directory and Creating files by using File.IO classess. |
| **64** | Fetching Directory and File details by using File.IO classes. |
| **65** | Exception handling by using try,catch and finally . |
| **66** | System Exceptions and Application Exceptions handling . |
| **67** | Creating application exception and throwing it. |
| **68** | Threads in C# like single thread and multi thread ? |
| **69** | Creating single thread and multi thread ? |
| **70** | Implementing Thread methods like Start(),Sleep(0,Abort() . |
| **71** | What is Thread Life Cycle ? |
| **72** | Synchronizing threads ? |
| **73** | Explaining Delegates ? Types of Delegates ? |
| **74** | Working with Events in C#? |
| **75** | What are attribute and reflections in C#? |
| **76** | Explain CLR and its process? |
| **77** | Explain Casting , boxing and unboxing in C# ? |
| **78** | Explain CLS and CTS? |
| **79** | What do you mean by interoperability feature in C#? |
| **80** | What are command Line arguments in C# to be used with Main() function ? |