1. JS Introduction JavaScript is a scripting language used to create dynamic and interactive web content like forms, animations, games, etc.
2. JS Where To JavaScript can be written in the <script> tag in HTML head, body, or in an external .js file.</td></tr><tr><td>3. JS Output Use alert(), document.write(), console.log(), or innerHTML to show output.</td></tr><tr><td>4. JS Statements A JavaScript statement is a command to be executed (e.g., $\begin{bmatrix} 1 & x = 5 \end{bmatrix}$).</td></tr><tr><td>5. JS Syntax Syntax defines how JavaScript code must be written (e.g., variables, semicolons, case sensitivity).</td></tr><tr><td>6. JS Comments Used to explain code: // single-line and /* multi-line */.</td></tr><tr><td>7. JS Variables Variables store data. Use var, let, or const to declare them.</td></tr><tr><td>8. JS Let let declares a block-scoped variable.</td></tr><tr><td>9. JS Const const declares a constant (unchangeable) value.</td></tr><tr><td>10. JS Operators Used for operations: + , - , * , / , etc.</td></tr><tr><td>11. JS Arithmetic Operators Perform math: +, -, *, /, %.</td></tr><tr><td>12. JS Assignment Assign values: = , += , -= , etc.</td></tr><tr><td>13. JS Data Types Types of values: string, number, boolean, object, undefined, null, symbol, bigint.</td></tr><tr><td>14. JS Functions Reusable blocks of code: function greet() { }</td></tr><tr><td>15. JS Objects Key-value pairs to store related data: { name: "John", age: 30 }</td></tr><tr><td>16. JS Object Properties Values inside objects accessed with dot or bracket notation: obj.name.</td></tr><tr><td>17. JS Object Methods Functions inside objects: obj.greet = function() {}</td></tr><tr><td>18. JS Object Display Display using console.log(), JSON.stringify(), or in HTML.</td></tr><tr><td>19. JS Object Constructors Function used to create multiple similar objects: function Person(name, age) {}</td></tr></tbody></table></script>

- **20. JS Events** Code that runs in response to actions: onclick, onmouseover, etc. **21. JS Strings** Text values in quotes: 'hello', "world" **22. JS String Methods** Functions for strings: | length |, | toUpperCase() |, 23. JS String Search Find substrings: | index0f() |, | includes() |, **24. JS String Templates** Template literals: `Hello \${name}` 25. JS String Numbers Convert between strings and numbers using parseInt(), Number(), etc. **26. JS BigInt** Used for very large numbers beyond regular Number limits. 27. JS Number Methods Methods like toFixed(), toPrecision(), isNaN(). 28. JS Number Properties Properties like MAX VALUE, MIN VALUE, NaN. **29. JS Arrays** Ordered list of items: let colors = ["red", "green"] **30. JS Array Methods** Functions like push(), pop(), shift(), join() **31. JS Array Search** Find values: indexOf(), includes(), find() **32. JS Array Sort** Sort values: sort(), reverse() **33. JS Array Iteration** Loop through items: forEach(), map(), filter() **34. JS Array Const** Arrays declared with const can't be reassigned but can be modified. **35. JS Dates** Work with dates using new Date() **36. JS Date Formats** Parse/format date strings: toDateString(), toISOString() **37. JS Date Get Methods** Get parts of date: getFullYear(), getMonth(), etc. **38. JS Date Set Methods** Set parts of date: | setFullYear() |, | setMonth() |, etc.
- 41. JS Booleans Logical true/false values.

39. JS Math Perform math with Math object: Math.sgrt(),

40. JS Random Generate random numbers: Math.random()

Math.pow()

- **42. JS Comparisons** Compare values: == , === , != , > , <
- **43. JS If Else** Decision making: if, else if, else
- **44. JS Switch** Multi-branch condition: switch(expression) { case ... }
- **45. JS Loop For** Standard loop: for (let i = 0; i < 5; i++)
- **46. JS Loop For In** Loop through object keys: for (let key in obj)
- **47. JS Loop For Of** Loop through array values: for (let value of arr)
- **48. JS Loop While** Loop while condition is true: while (i < 5)
- **49. JS Break** Exit loop early using break
- **50. JS Iterables** Objects that can be looped: arrays, strings, sets, etc., used with for...of.