Python:
1) strings in python can be created with singular, double or triple
quotes. Line break in triple qutoes can be done without using \n.
Otherwise backslashes are speacial characters. If you put backslash in
front of another character it changes the meaning of that. for example /t
is tab character.

2) The answer is 30, beacuse in the first line we changed the value of a
to c which is 30.
3) NameError. This error occurs in python when you try to use a variable,
module or function that doesn't exists.
4) a option is the correct choice.
5) "my name" is not acceptable for naming a variable. Because spaces are
not acceptable in naming.
6) c option is the right choice.
7) int, because 10 is an integer
8) the answer is d. Because pythin waits till you press enter to continue
code
9) string. Because input() convert any data from user into str
10) a option is right. Because int() converts the value into int
11) Reads some data from the user and returns it in a program as a
string.
12) Once the user presses "Enter".
13) 1010
14) Some data the computer receives from the user.
15) How many unique elements there are in the list.
16) [1, 2, 3, 4, 5]
17) print(len(hidden))
18) list[123]
19) a list
20) IndexError
21) [1, 2, 3, 4][-4]
22) 3
23) print(fruits[5])
24) list[index]
25) 4
26) 1
27) Square root
28) ZeroDivisionError exception
29) True
30) None

SQL:
1. What do you mean by table and field in SQL?
 In SQL, a table is a way to store information in rows and columns. Each
row represents a record, and each column represents a field or attribute
of that record.
2. What are joins in SQL?
 Joins in SQL are used to combine data from two or more tables based on
related columns. There are several types of joins including Inner Join,
Left Join, Right Join, and Full Outer Join.
3. Write an SQL statement to get all the columns from the Customers table
 SELECT * FROM Customers;

4. What is the difference between CHAR and VARCHAR datatype in SQL? CHAR is a fixed-length data type that always uses the same amount of storage regardless of the amount of data, while VARCHAR is a variable-length data type that only uses as much storage as needed for the data being stored.

5. What is the difference between VARCHAR and NVARCHAR datatype in SQL Server?
VARCHAR stores variable-length character strings, while NVARCHAR stores Unicode variable-length character strings.

6. What is a Primary key?
 A Primary Key is a unique identifier for each record in a table.

7. What are Constraints?
 Constraints are rules that restrict the values that can be inserted into a column. Examples include Primary Key, Unique, Not Null, and Foreign Key constraints.

8. What is a Unique key?
  A Unique Key is a constraint that ensures that each value in a column is unique.

9. What is a Foreign key?
   A Foreign Key is a column or group of columns in one table that refers to the Primary Key of another table, creating a relationship between the two tables.

10. Write a SQL query to display the current date?
   SELECT GETDATE();

11. List the different type of joins? And explain them.
The different types of joins are Inner Join, Left Join, Right Join, and Full Outer Join. Inner Join returns only matching rows, Left Join returns all rows from the left table and matching rows from the right table, Right Join returns all rows from the right table and matching rows from the left table, and Full Outer Join returns all rows from both tables with NULL values where there are no matches.

12. What are Entities and Relationships? Entities are objects or concepts that can have data attributes (fields) and Relationships describe how entities are connected or related to each other.

13. What is an Index?
An Index is a database object that improves the speed of data retrieval operations on a table.

14. What is Normalization and what are the advantages of it?
Normalization is the process of organizing data in a database to reduce redundancy and dependency. It improves the efficiency, accuracy, and consistency of data storage.

15. What is the difference between DROP and TRUNCATE commands?
DROP command deletes entire table from the database whereas TRUNCATE command removes all rows from the table but keeps the table structure.

16. What are the different operators available in SQL?
The different operators available in SQL include comparison operators, logical operators, and arithmetic operators.

17. Are NULL values same as that of zero or a blank space?NULL values are not the same as zero or a blank space. A NULL value represents the absence of any data value in a column.

18. How you can get the number of records in a table?
SELECT COUNT(*) FROM table_name;

19. Write a SQL query to find the names of employees from 'Employee' table, that begin with 'A'?
SELECT * FROM Employee WHERE name LIKE 'A%';

20. Write a SQL query to find the names of employees from 'Employee' table, that ends with 'A'?
SELECT * FROM Employee WHERE name LIKE '%A';
21. Write a SQL query to get the highest salary of an employee from 'Employee' table?
SELECT MAX(salary) FROM Employee;
22. Write a SQL query to get the third highest salary of an employee from 'Employee' table?
SELECT salary FROM (SELECT DISTINCT TOP 3 salary FROM Employee ORDER BY salary DESC) AS emp ORDER BY salary ASC LIMIT 1;
23. What is the need for group functions(statement) in SQL?
 Group functions in SQL perform calculations on groups of rows and return a single value. Examples
include COUNT, SUM, AVG, MIN, and MAX.
24. What is a Relationship and what are they?In SQL, Relationships describe how entities are connected or related to each other, such as one-to-one, one-to-many, and many-to-many relationships.
25. How can you insert NULL values in a column while inserting the data?
To insert NULL values into a column, you can use the keyword NULL or leave the field empty when inserting data.
26. What is the main difference between 'BETWEEN' and 'IN' condition operators?
BETWEEN condition operator selects values within a range, while IN condition operator selects values that match any of a specified list of values.
27. Why are SQL functions used? And what kind of functions do you know?
 SQL functions are used to perform operations on data and return a result. Examples include mathematical functions, string functions, date/time functions, and aggregate functions.
28. What is the difference between 'HAVING' CLAUSE and a 'WHERE' CLAUSE? Please give example.
WHERE clause filters individual rows before they are grouped, while HAVING clause filters group results after they are grouped.
29. List some case manipulation functions in SQL?Case manipulation functions in SQL include UPPER, LOWER, and INITCAP (initial capital).
30. How can you select unique records from a table?
To select unique records from a table, you can use the DISTINCT keyword with the SELECT statement. For example: SELECT DISTINCT column_name FROM table_name.

HTML and CSS:
Q-1. What is the purpose of the <head> element in an HTML document?
A1. The purpose of the <head> element in an HTML document is to contain metadata and other information about the webpage, such as the title, links to stylesheets, and scripts.
A1. Назначение элемента <head> в HTML-документе состоит в том, чтобы содержать метаданные и другую информацию о веб-странице, такую как заголовок, ссылки на таблицы стилей и скрипты.

Q-2. What is the purpose of the <body> element in an HTML document?
A2. The purpose of the <body> element in an HTML document is to contain the main content of the webpage that will be displayed in the browser.

A2. Назначение элемента <body> в HTML-документе состоит в том, чтобы содержать основное содержимое веб-страницы, которое будет отображаться в браузере.

Q-3. How do you make each word in a text start with a capital letter?
A3. To make each word in a text start with a capital letter, you can use the CSS property "text-transform" with the "capitalize" value.
A3. Чтобы каждое слово в тексте начиналось с заглавной буквы, вы можете использовать свойство CSS "text-transform" со значением "capitalize".

Q-4. How can we add a CSS rule to the HTML document? Write down three types of CSS.
A4. To add a CSS rule to an HTML document, you can use the <style> element in the <head> section of the HTML document. Three types of CSS are inline, internal, and external styles.
A4. Чтобы добавить правило CSS в HTML-документ, вы можете использовать элемент <style> в разделе <head> HTML-документа. Три типа CSS - это встроенные, внутренние и внешние стили.

Q-5. Compare display:inline and display:block.
A5. display:inline makes an element behave like text, flowing with other content horizontally, while display:block makes an element behave like a block, taking up a full width and creating a new line after itself.
A5. display:inline заставляет элемент вести себя как текст, перетекая с другим содержимым по горизонтали, в то время как display:block заставляет элемент вести себя как блок, занимая всю ширину и создавая новую строку после себя.

Q-6. How Does CSS3 Support The Responsive Web Designing?
A6. CSS3 supports responsive web designing by providing media queries, flexible box layout, grid layout, and other features that allow web developers to create layouts that adjust to different screen sizes and devices.
A6. CSS3 поддерживает адаптивный веб-дизайн, предоставляя медиа-запросы, гибкую компоновку блоков, макет сетки и другие функции, которые позволяют веб-разработчикам создавать макеты, адаптируемые к различным размерам экрана и устройствам.

Q-7. What Is A CSS Selector?
A7. A CSS selector is a pattern used to select and apply styles to one or more elements on a webpage.
A7. Селектор CSS - это шаблон, используемый для выбора и применения стилей к одному или нескольким элементам на веб-странице.

Q-8. What Is An ID Selector?
A8. An ID selector is a CSS selector that selects an element by its unique ID attribute.
A8. Селектор идентификаторов - это селектор CSS, который выбирает элемент по его уникальному атрибуту ID.

Q-9. What Is A Class Selector?
A9. A class selector is a CSS selector that selects an element by its class attribute.

A9. Селектор класса - это селектор CSS, который выбирает элемент по его атрибуту class.

Q-10. What Is The Difference Between An ID Selector And The Class Selector?
A10. The main difference between an ID selector and a class selector is that an ID selector selects one unique element, while a class selector can select multiple elements that share the same class.
A10. Основное различие между селектором идентификаторов и селектором классов заключается в том, что селектор идентификаторов выбирает один уникальный элемент, в то время как селектор классов может выбирать несколько элементов, которые совместно используют один и тот же класс.

Q-11. What Are Child Selectors In CSS?
A11. Child selectors in CSS select elements that are direct children of another element.
A11. Дочерние селекторы в CSS выбирают элементы, которые являются прямыми дочерними элементами другого элемента.

A12. To make border rounded with CSS3, you can use the "border-radius" property with the desired value.

Q-12. How Do You Make Border Rounded With CSS3?
A12. Чтобы сделать границу округленной с помощью CSS3, вы можете использовать свойство "border-radius" с желаемым значением.

Q-13. Write a CSS rule to make the background image repeat along the vertical axis.
A13. To make the background image repeat along the vertical axis, you can use the "background-repeat" property with the "repeat-y" value.
A13. Чтобы фоновое изображение повторялось вдоль вертикальной оси, вы можете использовать свойство "background-repeat" со значением "repeat-y".

Q-14. Describe how to convert default numbered list to letters or roman numerals.
A14. To convert a default numbered list to letters or roman numerals, you can use the "list-style-type" property with the desired value.
A14. Чтобы преобразовать нумерованный список по умолчанию в буквы или римские цифры, вы можете использовать свойство "list-style-type" с желаемым значением

Q-15. Describe how to convert default bulleted list to square or disk.
A15. To convert a default bulleted list to square or disk, you can use the "list-style-type" property with the "square" or "disc" value.
A15. Чтобы преобразовать маркированный список по умолчанию в квадратный или дисковый, вы можете использовать свойство "list-style-type" со значением "square" или "disc".

Q-16. What Is CSS Box Model And What Are Its Components?
A16. The CSS Box Model is a model that describes how elements are laid out on a webpage, and its components include content, padding, border, and margin.

A16. Модель CSS Box - это модель, которая описывает, как элементы размещаются на веб-странице, и ее компоненты включают содержимое, отступы, границы и поля.

Q-17. How do you group selectors? Describe.
A17. You can group selectors by separating them with commas in the CSS rule, which allows you to apply the same styles to multiple selectors at once.
A17. Вы можете сгруппировать селекторы, разделив их запятыми в правиле CSS, которое позволяет применять одни и те же стили сразу к нескольким селекторам.

Q-18. How Do You Add Comments In CSS and in HTML?
A18. In HTML, you can add comments using the <!-- --> syntax, while in CSS, you can add comments using the /* */ syntax.
A18. В HTML вы можете добавлять комментарии, используя синтаксис <!-- -->, в то время как в CSS вы можете добавлять комментарии, используя синтаксис /* */.

Q-19. Compare span element and p element.
A19. The <span> element is an inline element used to apply styles to specific parts of text, while the <p> element is a block element used to separate paragraphs of text.
A19. Элемент <span> является встроенным элементом, используемым для применения стилей к определенным частям текста, в то время как элемент <p> является блочным элементом, используемым для разделения абзацев текста.

Q-20. In Box Model what is the full size of an element's height?
A20. The full size of an element's height in the CSS Box Model includes the content height, padding height, border height, and margin height.
A20. Полный размер высоты элемента в модели CSS Box включает высоту содержимого, высоту отступа, высоту границы и высоту поля.

Q-21. What is the outer most area of a CSS Box model? Explain.
A21. The outermost area of a CSS Box Model is the margin, which is the space between the element and other elements on the webpage.
A21. Самой внешней областью модели CSS-бокса является поле, которое представляет собой пространство между элементом и другими элементами на веб-странице.

Q-22. What is the correct HTML for creating a hyperlink? Explain.
A22. The correct HTML for creating a hyperlink is link_text, where "link_url" is the URL of the page you want to link to, and "link_text" is the visible text that will be clicked on.
A22. Правильным HTML-кодом для создания гиперссылки является link_text, где "link_url" - это URL страницы, на которую вы хотите перейти по ссылке, а "link_text" - это видимый текст, по которому будет выполнен переход.

Q-23. What is the correct format for the image path of the background-image property Explain

A23. The correct format for the image path of the background-image property is url("image_path"), where "image_path" is the file path of the image.
A23. Правильный формат пути к изображению свойства background-image - url("image_path"), где "image_path" - это путь к файлу изображения.

Q-24. Look at the anchor element below. Pictures Describe target=_blank.
A24. The target="_blank" attribute in the anchor element opens the linked page in a new browser window or tab.
A24. Атрибут target="_blank" в элементе привязки открывает связанную страницу в новом окне или вкладке браузера.

Q-25. What is element's full height with the following styles? div {height: 300px; padding: 4px; border: 2px dashed green; margin:2px;}
A25. The full height of an element with the styles given is 312px (300px content height + 4px padding height + 4px border height + 4px margin height).
A25. Полная высота элемента с заданными стилями составляет 312 пикселей (высота содержимого 300 пикселей + высота заполнения 4 пикселя + высота границы 4 пикселя + высота полей 4 пикселя).

Q-26. What is a media query in CSS?
A26. A media query in CSS is a way to apply different styles to a webpage based on certain conditions, such as screen size or device type.
A26. Медиа-запрос в CSS - это способ применения различных стилей к веб-странице на основе определенных условий, таких как размер экрана или тип устройства.

Q-27. What is the purpose of the !important rule in CSS?
A27. The !important rule in CSS is used to give priority to a specific style, overriding any other conflicting styles applied to the same element.
A27. Правило !important в CSS используется для придания приоритета определенному стилю, переопределяя любые другие конфликтующие стили, применяемые к тому же элементу.

Q-28. What is the purpose of the :hover pseudo-class in CSS?
A28. The :hover pseudo-class in CSS is used to apply styles to an element when it is being hovered over by the user's mouse.
A28. Псевдокласс :hover в CSS используется для применения стилей к элементу при наведении на него курсора мыши пользователя.

Q-29. Why is it important to use semantic HTML?
A29. Using semantic HTML is important because it helps improve website accessibility and search engine optimization by providing clear and meaningful structure to the content.
A29. Использование семантического HTML важно, поскольку оно помогает улучшить доступность веб-сайта и оптимизацию в поисковых системах, обеспечивая четкую и значимую структуру контента.

Q-30. What is the purpose of the background property in CSS?
A30. The background property in CSS is used to set the background color, image, and other properties for an element.

A30. Свойство background в CSS используется для установки цвета фона, изображения и других свойств элемента.