

Assignment Task For Technical round

Section A: Basic Programming:

1. What is the difference between = and == in programming?

A: In programming, there is a huge difference between = and ==. The '=' is used as assignment operator. With help of this '=' operator we can assign a value to the variable using this '='. Whereas, '==' is used to check/compare for the equality between two variables or values.

2. Name any two basic data types commonly used in programming.

A: In programming, the commonly used basic data types are integer and strings.

3. Given the list/array a = ['apple', 'orange'], what will be the output of a[1]?

A: The output is:

'Orange'

4. What is a loop? Give an example of a situation where you would use a loop.

A: A loop is a repetitive code block, which contains set of instructions, which are need to be executed repeatedly. The loop continues till the given condition becomes true. It reduces the LOC and time complexity.

Example Situation: To print the numbers from 0 to n we can use for loop to iterate through all the numbers from 1 to n-1.

5. What is the purpose of using conditions (like if-else) in a program?

A: The main purpose of using if-else conditions in a program is that it controls the flow of execution of statements based on the user given condition(true or false). These are decision statements, which makes decisions based on conditions.

6. What are the four fundamental principles or pillars of Object-Oriented Programming (OOP)?

A: The 4 fundamental principle of OOP's are:

1. Abstraction
2. Inheritance
3. Encapsulation
4. Polymorphism

Section B: Database, HTML & CSS Basics

7. What is HTML used for in web development?

A: HTML stands for "Hyper-text Markup Language". The main usage of HTML in web development is that it structures the content which is present in web pages, defining how content is displayed when a user opens web pages.

8. Write an HTML code to display the message: "Welcome to My Page" in a browser using any heading tag.

A: <!DOCTYPE html>

<html>

<head>

<title>Pavan</title>

<h1> Welcome to My Page</h1>

</head>

</html>

9. What is the use of CSS?

A: CSS stands for “Cascading Style Sheets”. CSS is used for styling the web page and to control the visual representation of the displaying web pages.

10. What is a primary key in a Database?

A: Primary Key in database is a field which identifies the unique records/values within that tables.

Section C: Aptitude & Logical Reasoning

11. A man buys 5 pens for ₹120 and sells each for ₹30. What is his total profit or loss?

A: 5 pens for 120/- then cost price(CP) = $120/5 = 24/-$ for 1 pen

Sells each pen for 30/- then selling price(SP) = 30/-

Profit = Selling Price(SP) - Cost Price(CP) = $30 - 24 = 6$ rupees for 1 pen

Profit for 5 pens = $5 * 6 = 30/-$

Total Profit = 30/-

12. If the average of five numbers is 60, and four of them are 58, 62, 59, and 61 — what is the fifth number?

A: Avg. of 5 numbers = 60

4 numbers are = 58, 62, 59, 61

Total of 5 numbers = $5 * 60 = 300$

Sum of given 4 numbers = $58 + 62 + 59 + 61 = 240$

5th number = $300 - 240 = 60$

13. A train travels 90 km/hr. How long will it take to cover 225 km?

A: Speed = 90 kmph

Distance = 225 km

Time = Distance/speed = $225/90 = 2.5$ hrs

14. What comes next in the series: 2, 4, 7, 11, 16, ____? .

A: 2, 4, 7, 11, 16, __ in this series 22 will come next because if we do subtraction among the numbers we will get to know that the difference between each will increase starting from 2, 4, 5, 6.

Section D: Personality & Interest in Tech

15. What excites you the most about working on real-world projects?

A: For me working on real-world projects turns the knowledge or theory into value. Solving real world problems, impact over theory, innovation with theory and critical thinking.

16. Are you open to learning new programming languages if needed?

A: Yes, I am open to learn new programming languages if required because for me learning will be exciting.

17. What do you enjoy the most when working with technology or coding?

A: When working with technology or coding i really enjoy solving puzzles, thinking about solution and continuous learning.

18. How do you approach situations where a concept is difficult to understand during the learning process?

A: If i get a situation where a concept is difficult to understand during the learning process the, first i will approach my professors or mentors. Then i will try googling it to find the solution and if that not work then, i will try to do it hands-on which is a easy way to learn instead of just listening or reading.

19. Which programming languages are you most familiar with?

A: Python, Mysql, HTML, CSS.

20. Do you consider yourself a quick learner? (Yes/No)

A: Yes