

## EXCEL

Answers of the excel test

Q1. Calculate the total quantity sold in each region

=SUMIF(C2:C31, "East", F2:F31)

Q2: Count how many orders used UPI as payment?

=COUNTIF(I2:I31, "UPI")

Q3: What is the total quantity sold for Laptop?

=SUMIF(D2:D31, "Laptop", F2:F31)

Q4. What is the total revenue generated in the East region?

=SUMIFS(F2:F31, C2:C31, "East", D2:D31, "Laptop")

Q5. How many "Tablet" orders were made in the West region

=COUNTIFS(D2:D31, "Tablet", C2:C31, "West")

Q6. Average unit price for "Headphones"

=AVERAGEIF(D2:D31, "Headphones", G2:G31)

Find what product did Peter Order

=VLOOKUP(I16, Data!B1:I31, 3, 0)

What is the Order ID of Victor (Use Index and Match)

=INDEX(Data!A2:A31, MATCH(I21, Data!B2:B31, 1))

Theoretical Question

#What is the difference between count, counta, and countblank?

1. COUNT

It counts the number of cells that contain numeric values only. Cells that have string values, special characters, and blank cells will not be counted.

2. COUNTA

It counts the number of cells that contain any form of content. Cells that have string values, special characters, and numeric values will be counted. However, a blank cell will not be counted.

3. COUNTBLANK

As the name suggests, it counts the number of blank cells only. Cells that have content will not be taken into consideration.

#How do you create a dropdown list in excel?

The 'Data Validation' option found in the Data tab can accomplish this.

Select the cells in which the drop-down lists are to be added.

Select Data, then click on Data Validation.

Select List from the menu under Allow.

Give the input for the items (separated by a comma) in your dropdown list in the Source tab.

The dropdown list is ready.

## PYTHON

#Q1. Add a new column total\_sales product of quantity and price

```
df["Total Sale"] = df["Quantity"] * df["Unit Price"]
```

#Q2. Show total quantity sold per region

```
df.groupby("Region")["Quantity"].sum()
```

#Q3. Find the most sold product (by quantity)

```
df.groupby("Product")["Quantity"].sum().sort_values(ascending=False).head(1)
```

Q4. Filter all orders made using "UPI" as payment

```
df[df["Payment Mode"] == "UPI"]
```

Q5. Export the modified DataFrame to a new CSV

```
df.to_csv("sales_data_processed.csv", index=False)
```

Use this for Python Theoretical Questions

<https://www.geeksforgeeks.org/python/python-interview-questions/>

27. Differentiate between List and Tuple?

14. What is a break, continue and pass in Python?

## SQL

```
CREATE TABLE sales (  
    order_id INT,  
    customer_name VARCHAR(50),  
    region VARCHAR(20),  
    product VARCHAR(50),  
    category VARCHAR(30),  
    quantity INT,  
    unit_price INT,  
    order_date DATE,  
    payment_mode VARCHAR(30)  
);
```

```
INSERT INTO sales VALUES  
(101, 'Alice', 'East', 'Laptop', 'Electronics', 1, 70000, '2023-01-01', 'Credit Card'),  
(102, 'Bob', 'West', 'Tablet', 'Electronics', 2, 25000, '2023-01-02', 'Debit Card'),  
(103, 'Charlie', 'South', 'Headphones', 'Accessories', 3, 3000, '2023-01-03', 'UPI'),  
(104, 'Alice', 'East', 'Monitor', 'Electronics', 1, 15000, '2023-01-04', 'Net Banking'),  
(105, 'Daniel', 'North', 'Keyboard', 'Accessories', 5, 1500, '2023-01-05', 'Credit Card'),  
(106, 'Emily', 'West', 'Laptop', 'Electronics', 1, 70000, '2023-01-06', 'Debit Card'),  
(107, 'Frank', 'South', 'Mouse', 'Accessories', 4, 800, '2023-01-07', 'UPI'),  
(108, 'George', 'East', 'Tablet', 'Electronics', 2, 26000, '2023-01-08', 'Credit Card'),  
(109, 'Alice', 'East', 'Headphones', 'Accessories', 2, 3000, '2023-01-09', 'UPI'),  
(110, 'Helen', 'North', 'Monitor', 'Electronics', 1, 14000, '2023-01-10', 'Net Banking');
```

Q1. Get total quantity sold in each region  
SELECT region, SUM(quantity) AS total\_quantity  
FROM sales  
GROUP BY region;

Q2. Retrieve all orders where payment was done using UPI  
SELECT \*  
FROM sales  
WHERE payment\_mode = 'UPI';

Q3. Find the average unit price of each product  
SELECT product, AVG(unit\_price) AS avg\_price  
FROM sales  
GROUP BY product;

<https://www.geeksforgeeks.org/sql-interview-questions/#sql-basic-interview-questions>

Ask about joins please

Machine Learning

<https://www.geeksforgeeks.org/machine-learning/machine-learning-interview-questions/>

Power BI

<https://www.geeksforgeeks.org/power-bi/power-bi-interview-questions-and-answers/>

## GENERIC SCENARIOS — STUDENT DOUBTS (with Ideal Responses)

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### ✓ 1. “I’m stuck... I don’t know how to start.”

**Scenario:**

*"I've been given a dataset and asked to do analysis, but I don't even know where to begin."*

**Ideal Answer:**

"That's completely normal. Start by asking yourself: what's the goal of the analysis? If it's unclear, begin with exploratory data analysis (EDA):

- Look at the structure using `.head()` or `df.info()`
- Check for missing values
- Summarize numerical features with `describe()`
- Use charts like histograms or bar charts to get a feel for trends."

### ✓ 2. “I’m getting different results than my friend — we used the same data.”

**Scenario:**

*"We both used the same CSV but my output is different."*

**Ideal Answer:**

"Check if any preprocessing (like dropping nulls, filtering, date parsing) is different. Also verify if you're using the same versions of libraries (especially in Python or Power BI). Even subtle differences in code or data types can affect results."

### 3. “I don’t know which algorithm to use.”

**Scenario:**

*"There are so many machine learning algorithms. How do I know which one to use?"*

**Ideal Answer:**

"Start with the type of problem:

- Classification → Logistic Regression, KNN, SVM, Trees
  - Regression → Linear, Ridge, Lasso, XGBoost
  - Clustering → KMeans, DBSCAN
- Also, use baseline models first, then iterate using model performance and data insights."

### 4. “How do I explain my project in interviews?”

**Scenario:**

*"I built a model but I'm not sure how to talk about it confidently."*

**Ideal Answer:**

"Use this structure:

- What problem were you solving?
- What was the dataset like?
- What steps did you take (EDA, preprocessing, modeling)?
- What was the result and how did you evaluate it?  
Keep it structured and avoid diving too deep unless asked."