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**COURSE NAME – DATA ANALYTICS WITH GenAI**

**SUBJECT – EXCEL**

**TOPIC – PIVOT TABLE & CHARTS**

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## Q. No. 1

What is the purpose of a PivotTable in Excel?

Answer:

Purpose of a Pivot Table:

- Summarization of Data: It helps you convert long, detailed datasets into clear summaries (like totals, averages, counts).
- Quick Data Analysis: You can analyze trends or patterns without writing formulas.
- Data Grouping: It groups data by categories (Ex.: months, regions, products, departments).
- Easy Comparison: Helps compare different variables side-by-side (Ex.: sales by product and by month).
- Dynamic Reporting: You can drag-and-drop fields to instantly change the view – no need to edit raw data.
- Filtering Large Data: Pivot tables allow filtering using slicers or dropdowns to focus on specific information.

For Example:

If you have sales sheet with thousands of rows (Product, Salesperson, Month, Amount), a pivot table can instantly show:

- Total sales per product
- Sales per month
- Top-performing salesperson
- Average sales amount.

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## Q. No. 2

Create a PivotTable to show Total Sales by Region.

Answer:

### 1. Select your data

Your dataset should have at least:

- **Region**
- **Sales (or Amount)**

Highlight the full table (or click any cell inside it).

### 2. Insert a Pivot Table

1. Go to the **Insert** tab
2. Click **PivotTable**
3. Choose where to place the Pivot Table:

- **New Worksheet** (recommended)
4. Click **OK**

### 3. Set up the Pivot Table fields

In the PivotTable Field List:

- Drag **Region** → **Rows**
- Drag **Sales** → **Values**

Excel will automatically calculate:

- **Sum of Sales** for each region

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Q. No. 3

Apply Conditional Formatting to highlight sales greater than 400.

Answer:

#### Steps to Apply Conditional Formatting for Sales Greater than 400 in Excel

- **Select the Sales Column**
  - Click on the first cell in the **Sales** column (e.g., B2) and drag down to select all the cells that contain sales data. Alternatively, click the column header to select the entire column.
- **Open the Conditional Formatting Menu**
  - Navigate to the **Home** tab on the Excel Ribbon.
  - In the **Styles** group, click on **Conditional Formatting**.
- **Choose the Highlight Rule**
  - From the drop-down menu, hover over **Highlight Cells Rules**.
  - Click on **Greater Than...** from the submenu.
- **Set the Condition**
  - In the **Greater Than** dialog box, enter the value **400** in the field that says “Format cells that are greater than.”
  - Choose a formatting style (e.g., **Light Red Fill with Dark Red Text**), or click on **Custom Format** for additional formatting options.
- **Apply the Rule**
  - After selecting your desired format, click **OK** to apply the conditional formatting.
- **View the Results**
  - All sales values greater than 400 will now be highlighted with the selected formatting.

Q. No. 4:

Explain the difference between Sorting and Filtering with an example from this dataset.

Answer:

### Sorting:

- **Purpose:** Organizes data in ascending or descending order based on a column (e.g., A-Z, Z-A, or smallest to largest).
- **Effect:** Rearranges the entire dataset.
- **Example:** Sort sales amounts from highest to lowest.

Example:

We have one table, in which first column shows **Product** and the other column shows **Quantity**.

First, we will sort **Product by A-to-Z condition**,

Where we will get Product in a table is assembled according to the condition.

Second, we will sort **quantity by lowest to largest condition**,

Where we will get Quantity in a table is assembled according to the condition.

### Filtering:

- **Purpose:** Hides rows that don't meet specific criteria, showing only the data, you need.
- **Effect:** Keeps the data intact but temporarily hides non-relevant rows.
- **Example:** Filter to show only sales greater than 400.

Example:

Steps:

- Select the entire table (A1:E21).
- Go to Home → Sort & Filter → Filter (or press Ctrl + Shift + L).
- You will now see small dropdown arrows on each column header.
- Click the dropdown arrow on “Region” (Column B).
- Uncheck Select All.
- Tick only “South”.
- Click OK.

Results:

Excel will display only the rows where Region = South, hiding all other regions.

Your filtered rows will include entries like:

20-01-2024 | South | Mangoes | 247 | 76

27-02-2024 | South | Apples | 417 | 29

26-03-2024 | South | Mangoes | 76 | 63. Etc.

Q. No. 5

Create a PivotChart showing Monthly Sales Trend.

Answer:

#### **Steps to Create a PivotChart for Monthly Sales Trend**

- **Prepare Your Data:**

dataset includes columns for **Date** and **Sales Amount**.

- **Create a PivotTable:**

- Select data range.
- Go to **Insert > PivotTable**.
- Choose **New Worksheet** and click **OK**.

- **Set Up the PivotTable:**

- Drag **Date** to the **Rows** area.
- Drag **Sales Amount** to the **Values** area (ensure it's set to **Sum**).
- Right-click a date in the PivotTable and choose **Group**. Select **Months** (and **Years** if needed).

- **Create a PivotChart:**

- With the PivotTable selected, go to **Insert > PivotChart**.
- Choose **Line Chart** or another chart type and click **OK**.

- **Customize the Chart:**

- Edit the **chart title** to something like “Monthly Sales Trend.”
- Optionally, adjust axis labels and chart colours for better presentation.

**Here is my Excel Workbook**