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## ASSIGNMENT - II

### (Power Pivot & Solver)

**Ques.1** What is Power Pivot, and how does it extend the capability of Excel?

**Ans.1** Power Pivot is an advanced data modeling tool in Excel.

- It allows working with large datasets (millions of rows).
- It enables multi-table analysis using relationships.
- Uses DAX (Data Analysis Expressions) for powerful calculations.

#### Benefits:

- Faster performance than normal excel formulas.
- Advanced calculations and KPIs.
- Better support for Pivot Tables.

# Power Pivot turns Excel into a mini BI tool.

**Ques.2** How do you import data into Power Pivot from multiple sources?

**Ans.2** Go to Power Pivot Tab → Manage

- Click get data.
- Choose Sources:
  - Excel
  - CSV/Text
  - SQL Server
  - Access
- Load each dataset into the Data Model.
- Result: Multiple Tables are imported and can be related together.

**Ques.3** Explain the process of creating relationships between tables in Power Pivot.

**Ans.3-2)** Open Power Pivot → Manage.

- Switch to Diagram View
- Drag a primary key from one table to a foreign key in another.
- Ensure data types match.

EXAMPLE: Customer ID in Customers Table → Customer ID in Orders Table.

# Relationships allow combining data across tables in Pivot Tables.

**Ques.4** How would you create calculated columns and measures in Power Pivot?

**Ans.4-2) Calculated Column:**

- Works row by row
- Created inside a table.

EXAMPLE: Total Price = Quantity \* Price.

Measure:

- Used in Pivot Tables.
- Aggregates data.

EXAMPLE: Total Sales = SUM (Sales[Amount])

# Calculated columns store data, measures calculate results dynamically.

**Ques.5** What is the purpose of the Solver add-in in Excel?

**Ans.5-2)** Solver is used to find the best solution to a problem.

- It changes selected cells to maximise, minimise, or reach a target value.

- Commonly used in:
- Profit Maximisation
- Cost Minimisation
- Resource Allocation.

# EXAMPLE: Maximise profit while staying within budget limits.

Ques 6 How do you set up constraints in Solver to optimise a solution?

Ans 6 3) Enable Solver from Excel Add-ins.

1. Go to Data → Solver
2. Set:
  - Objective cell (Max / Min / Value)
  - = Variable cells.
3. Click Add to define constraints:
  - $\leq$ ,  $\geq$ , or  $=$
  - Integer or Binary limits.
4. Click Solve

EXAMPLE: Total Cost  $\leq$  Budget

Unit Produced  $\geq 0$

# Constraints ensure the solution is realistic and valid.