

**Computer Lab - Practical Question Bank**  
**FACULTY OF COMMERCE,**  
**OSMANIA UNIVERSITY**

---

**B.Com (Business Analytics) II Semester**  
**Data Analytics Essentials – (2025-26)**

**Time: 60 Minutes**

**Record : 10**

**Skill Test : 15**

**Viva - Voce : 10**

**Total Marks : 35**

**MS Excel/ Power Pivot/ Power query**

**Table for 1-10 Questions**

| Deptname - EmpID | Employee Name  | Gender | Date of Birth | Date of Hiring | Salary    |
|------------------|----------------|--------|---------------|----------------|-----------|
| D - 45001        | anne hardy     | F      | 3/1/1977      | 1/6/2006       | 45,000.00 |
| HR - 45001       | RAM Sastry     | m      | 23-04-1999    | 1/2/2007       | 25,000.00 |
| S - 45203        | syam mohan     | m      | 30-11-1987    | 6/8/2005       | 24,000.49 |
| O - 45301        | riya SHAarma   | f      | 29-05-1993    | 13-01-2010     | 22,000.00 |
| HR - 45005       | John f peter   | M      | 25-09-1997    | 28-10-2014     | 20,001.00 |
| HR - 45010       | jack           | M      | 4/6/1988      | 21-09-2012     | 15,800.00 |
| S - 45210        | soe green      | m      | 20-08-1982    | 15-11-2013     | 20,345.00 |
| S - 45220        | mc George      | F      | 26-12-1996    | 12/2/2008      | 35,789.00 |
| S - 45230        | sam peter      | M      | 22-11-1994    | 15-05-2016     | 28,349.00 |
| D - 45004        | madhuri Dev    | F      | 13-02-1984    | 1/9/2008       | 30,000.00 |
| HR-45205         | DEEPA sachdev  | f      | 20-10-1982    | 8/12/2018      | 56,000.05 |
| D-45218          | William james  | m      | 18-05-1985    | 20-10-2019     | 48459.45  |
| S-45090          | Leo thoMAS     | m      | 12/10/1983    | 1/4/2020       | 36,894.00 |
| D-45121          | JeNNifer LiNda | f      | 9/8/1980      | 12-09-222      | 52879.5   |
| M-45212          | Ava Lily       | f      | 12/4/1990     | 15-07-2024     | 19658.55  |

**EMPLOYEE DATA CLEANING & ANALYSIS LAB - EXCEL**

  
**CHAIRMAN**



Board of Studies in Commerce  
Osmania University

## I. Format and Analyze the Dataset as Required

1. Identify the **data type of each column** and briefly explain the employee dataset.
2. Split the combined column **DeptName-EmpID** into two separate columns and determine **how many departments** exist in the organization.
3. Clean and format the **Employee Name** column by removing extra spaces and applying **Proper Case**.
4. Standardize the **Gender** column values to a consistent format.
5. Convert all date columns to the format **YYYY/MM/DD**.
6. Calculate the **number of years of service** for each employee as on the current date.
7. Insert the **\$ currency symbol** in the Salary column.
8. Remove **decimal places** from the Salary column.
9. If employees retire at the age of **60**, calculate the **retirement date** for each employee.
10. Calculate the **number of employees in each department** and the **total salary department-wise** using Excel tools.
11. Apply **conditional formatting** to highlight salaries:
  - Above \$35,000 → Green
  - Between \$25,000 and \$35,000 → Yellow
  - Below \$25,000 → Red
12. Calculate the **current age** of each employee using the Date of Birth.
13. Identify the **highest and lowest salary** in the organization.
14. Sort employees based on **years of service** in descending order.

CHAIRMAN

Board of Studies in Commerce  
Osmania University

15. Create a **summary sheet** showing department-wise average salary.
16. Using the **Date of Birth** column, calculate the **current age** of each employee in years using Excel.
17. Based on the retirement age of **60**, identify employees who will retire **within the next 5 years** and highlight them.
18. Create a new column to categorize employees into salary bands such as:
  - High Salary
  - Medium Salary
  - Low Salary
  - based on the Salary values.
19. Using the **Date of Hiring** column, identify the **most recently hired employee** in the organization.
20. Using the **Department** column, **group employees department-wise** and display the employee details for each department using Excel.

## II. Table for Q20-Q25

### DATA CLEANING AND FORMATTING – EMPLOYEE DATASET

| Employee ID | First Name | Last Name | Gender (M/F) | Age (Years) | Date of Hiring (DD/MM/YYYY) | Salary in \$ |
|-------------|------------|-----------|--------------|-------------|-----------------------------|--------------|
| 45001       | anne       | hardy     | Female       | 45          | 06-01-2010                  | 4,50,000     |
| 45001       | Ram        | sastry    | Male         | 23          | 01-05-2000                  | 1,25,000     |
| 45203       | SHYAM      | max       | Male         | 35          | 01-08-2005                  | 2,15,000     |
| 45932       | Riya       | sharma    | Female       | 29          | 01-03-2010                  | 2,12,000     |
| 45020       | Jai        | dixit     | Male         | 48          | 08-10-2000                  | 4,65,000     |
|             |            |           |              |             |                             |              |
| 45006       | Madhuri    | dEv       | Female       | 38          |                             | 3,10,000     |
|             | Somya      |           |              |             |                             |              |
| 45078       | Varma      | varma     | Female       | 56          | 01-10-1990                  | 6,50,000     |
| 45039       | Raju       | beri      | Male         | 43          | 02-08-1999                  | 4,23,000     |



|       |         |        |        |    |            |          |
|-------|---------|--------|--------|----|------------|----------|
| 45020 | Jai     | dixit  | Male   | 48 | 08-10-2000 | 4,65,000 |
| 45038 | Kalyani | rao    | Female | 37 | 03-10-2010 | 3,12,000 |
| 45037 | Sam     | joseph | Male   |    | 04-02-2006 | 3,20,000 |
| 45059 | Poter   | Parker | Male   | 39 | 03-10-2008 | 2,89,000 |
| 45012 | Siddu   | rao    | Male   | 42 | 15-10-2007 | 4,12,000 |

**Dataset Given: Employee details containing blank rows, blank cells, inconsistent text formatting, and mixed data formats.**

21. Identify and remove all **completely blank rows** from the given employee dataset using Excel tools.
22. Locate all **blank cells** in the dataset and highlight them using conditional formatting.
23. Replace all highlighted blank cells in the dataset with the value "No Data" using Excel functions.
24. Create a new column by **concatenating the First Name and Last Name** columns to form a full employee name.
25. Clean and format the concatenated employee name column by:
  - Removing extra spaces
  - Converting text to **Proper Case**
26. The **Gender** column in the dataset contains values such as **Male** and **Female**. Using Excel, **replace these values with standardized codes**:  
 Male → **M**  
 Female → **F**  
 Ensure the entire column follows the same format.
27. Check the dataset for **duplicate Employee IDs** and highlight duplicate records using Excel features.
28. Identify the format of "Date of Hiring" column and change the format to Date-Month-Year format.
29. Clean the **Salary** column by:
  - Removing commas

  
**CHAIRMAN**  
 Board of Studies in Commerce  
 Osmania University  
 Hyderabad - 500 007, T.S.

- Converting values into numeric format
- Applying currency formatting (\$)

30. Sort the dataset in **descending order of salary** and identify the highest-paid employee.

### III. Power Query link(Order data set 1)

#### Power Query link ( Order data set 2)

Use Power Query Editor to answer the following questions:

31. Remove the rows which has improper dat
32. Split the column Customer ID into Customer ID and Customer Name.
33. Remove the currency Symbol and the decimals (Give reasons for removing them) from the column Cookies shipped.
34. Calculate the profits for each of the customer.
35. How many days does it take for the delivery of orders.
36. Load the second data set to the existing data set1.
37. Create Pivot table for the cookies shipped year wise and quarter wise.
38. Create pivot table and graph for the cookies shipped customer wise.
39. Create pivot table to know the top 5 customers.
40. Create pivot table to know the relationship between the sales and the delivery of the orders.

### IV. Power Query and Power Pivot Link (Sales\_2018)

#### Power Query and Power Pivot Link (Sales\_2019)

41. In Power Query Editor concatenate the first two rows.
42. In Power Query Editor Split the column ship mode and container.
43. What is percentage of total shipping amount for each order priority.
44. Find the bottom 3 Shipment Mode and Container by total Unit Sell Price.
45. Sort Customer ID by Unit Sell Price in ascending order.
46. Calculate the number days for shipment and establish a relationship

between the number days for shipment and shipment amount.

47. Find the total selling price customer wise?

48. Has Order priority has any influence on the shipping amount.

49. Which shipment mode has more customers?

50. Is order Id determined by discount percent?



**CHAIRMAN**  
Board of Studies in Commerce  
Osmania University  
Hyderabad - 500 007, T.S.