DAX Practice Problems – Extended Set (55 Questions with Answers)

Section A: Basic DAX Calculations (20 Questions)

1. Q1. Calculate total sales amount.

Total Sales = SUM(Sales[Amount])

2. Q2. Calculate total quantity sold.

Total Quantity = SUM(Sales[Quantity])

3. Q3. Profit = Revenue - Cost.

Profit = Sales[Revenue] - Sales[Cost]

4. Q4. Minimum order amount.

Min Order = MIN(Sales[Amount])

5. Q5. Maximum discount offered.

Max Discount = MAX(Sales[Discount])

6. Q6. Number of distinct customers.

Customer Count = DISTINCTCOUNT(Sales[CustomerID])

7. Q7. Create calculated column: OrderValue = Quantity * Price.

OrderValue = Sales[Quantity] * Sales[UnitPrice]

8. Q8. Create a Boolean column: IsHighValue (> ₹10000)

IsHighValue = Sales[Amount] > 10000

9. Q9. Get earliest order date.

First Order = MIN(Sales[OrderDate])

10. Q10. Get latest order date.

Last Order = MAX(Sales[OrderDate])

11. Q11. Round off sales to 2 decimal places.

Rounded Sales = ROUND(Sales[Amount], 2)

12. Q12. Average sales per order.

Avg Sales = AVERAGEX(VALUES(Sales[OrderID]), [Total Sales])

13. Q13. Add 'High', 'Medium', 'Low' classification.

Sales Tier = SWITCH(TRUE(), Sales[Amount] > 10000, "High", Sales[Amount] > 5000, "Medium", "Low")

14. Q14. Concatenate year and quarter.

YearQuarter = Sales[Year] & "-Q" & Sales[Quarter]

15. Q15. Apply IF: discount > 0.2 = ‘Heavy Discount’.

DiscountFlag = IF(Sales[Discount] > 0.2, "Heavy Discount", "Normal")

16. Q16. Count rows where quantity > 5.

Big Orders = CALCULATE(COUNTROWS(Sales), Sales[Quantity] > 5)

17. Q17. Days between order and delivery.

DaysToDeliver = DATEDIFF(Sales[OrderDate], Sales[DeliveryDate], DAY)

18. Q18. Show rank of each product by revenue.

Product Rank = RANKX(ALL(Sales[Product]), [Total Sales], , DESC)

19. Q19. Show top 5 cities by revenue.

City Rank = RANKX(ALL(Sales[City]), [Total Sales], , DESC)

20. Q20. Create full name column from FirstName and LastName.

FullName = Sales[FirstName] & " " & Sales[LastName]

Section B: Time Intelligence Functions (15 Questions)

21. Q21. Year-to-date sales.

YTD Sales = TOTALYTD([Total Sales], Sales[OrderDate])

22. Q22. Month-to-date sales.

MTD Sales = TOTALMTD([Total Sales], Sales[OrderDate])

23. Q23. Previous year’s sales.

Sales LY = CALCULATE([Total Sales], SAMEPERIODLASTYEAR(Sales[OrderDate]))

24. Q24. Previous quarter’s sales.

Sales LQ = CALCULATE([Total Sales], PREVIOUSQUARTER(Sales[OrderDate]))

25. Q25. Moving average sales (3 months).

3M Avg = AVERAGEX(DATESINPERIOD(Sales[OrderDate], MAX(Sales[OrderDate]), -3, MONTH), [Total Sales])

26. Q26. Growth % vs LY.

Growth % = DIVIDE([Total Sales] - [Sales LY], [Sales LY])

27. Q27. Compare current and previous month sales.

Sales Diff = [MTD Sales] - CALCULATE([MTD Sales], PARALLELPERIOD(Sales[OrderDate], -1, MONTH))

28. Q28. Running total YTD by region.

YTD Region = CALCULATE([Total Sales], FILTER(ALL(Sales[OrderDate]), Sales[OrderDate] <= MAX(Sales[OrderDate])))

29. Q29. Total orders last 12 months.

Last12M = CALCULATE(COUNT(Sales[OrderID]), DATESINPERIOD(Sales[OrderDate], MAX(Sales[OrderDate]), -12, MONTH))

30. Q30. Rolling 6 months average revenue.

Rolling6M = AVERAGEX(DATESINPERIOD(Sales[OrderDate], MAX(Sales[OrderDate]), -6, MONTH), [Total Sales])

31. Q31. Show fiscal year from calendar date.

Fiscal Year = IF(MONTH(Sales[OrderDate]) >= 4, YEAR(Sales[OrderDate]), YEAR(Sales[OrderDate]) - 1)

32. Q32. Current quarter name.

Quarter = "Q" & ROUNDUP(MONTH(Sales[OrderDate])/3, 0)

33. Q33. Count of new customers this year.

NewCustomers = CALCULATE(COUNTROWS(Customers), FILTER(Customers, YEAR(Customers[FirstOrderDate]) = YEAR(TODAY())))

34. Q34. Get week number from date.

WeekNum = WEEKNUM(Sales[OrderDate])

35. Q35. Days in month for given date.

DaysInMonth = DAY(EOMONTH(Sales[OrderDate], 0))

Section C: Advanced DAX & Business Logic (20 Questions)

36. Q36. Identify returning customers.

Returning = IF(CALCULATE(COUNTROWS(Sales), FILTER(Sales, Sales[CustomerID] = EARLIER(Sales[CustomerID]) && Sales[OrderDate] < EARLIER(Sales[OrderDate]))) > 0, "Yes", "No")

37. Q37. Show rank by customer loyalty points.

Loyalty Rank = RANKX(ALL(Customers), [Total Points], , DESC)

38. Q38. Calculate order frequency per customer.

OrderFreq = DIVIDE(COUNT(Sales[OrderID]), DISTINCTCOUNT(Sales[CustomerID]))

39. Q39. Identify inactive customers (no orders in last 6 months).

Inactive = NOT Sales[CustomerID] IN VALUES(RecentOrders[CustomerID])

40. Q40. Top 3 products per category.

Top3 = IF(RANKX(FILTER(Sales, Sales[Category] = EARLIER(Sales[Category])), [Total Sales], , DESC) <= 3, 1, 0)

41. Q41. Segment customers by revenue into Gold, Silver, Bronze.

Segment = SWITCH(TRUE(), [Total Sales] > 100000, "Gold", [Total Sales] > 50000, "Silver", "Bronze")

42. Q42. Create dynamic title using SELECTEDVALUE.

Title = "Sales Overview - " & SELECTEDVALUE(Calendar[Year])

43. Q43. Show product with highest revenue per category.

TopProduct = CALCULATE(MAX(Sales[Amount]), ALLEXCEPT(Sales, Sales[Category]))

44. Q44. Compare revenue of region vs national average.

Region vs Avg = [Total Sales] - CALCULATE(AVERAGE(Sales[Amount]), ALL(Sales))

45. Q45. Create KPI flag: Green if YoY > 10%, Red if < 5%.

KPI_Flag = SWITCH(TRUE(), [Growth %] > 0.1, "Green", [Growth %] < 0.05, "Red", "Yellow")

46. Q46. Show count of unique orders where discount was applied.

Discount Orders = CALCULATE(DISTINCTCOUNT(Sales[OrderID]), Sales[Discount] > 0)

47. Q47. Detect duplicates in Customer table.

DuplicateCheck = COUNTROWS(FILTER(Customers, Customers[Email] = EARLIER(Customers[Email]))) > 1

48. Q48. Create a calculated column: Margin %.

Margin % = DIVIDE(Sales[Profit], Sales[Revenue])

49. Q49. Identify most profitable product.

MostProfitProduct = TOPN(1, SUMMARIZE(Sales, Sales[Product], "Profit", SUM(Sales[Profit])), [Profit], DESC)

50. Q50. Calculate category-wise sales share.

Category Share = DIVIDE([Total Sales], CALCULATE([Total Sales], ALL(Sales[Category])))

51. Q51. Show top performing region by quarter.

TopRegion = RANKX(ALL(Sales[Region]), [Quarter Sales], , DESC)

52. Q52. Show sales per working day only.

Working Day Sales = CALCULATE([Total Sales], Calendar[IsWorkingDay] = TRUE())

53. Q53. Create an alert for orders with negative profit.

NegativeProfit = IF(Sales[Profit] < 0, "Alert", "OK")

54. Q54. Get median sales by category.

Median Sales = MEDIANX(FILTER(Sales, Sales[Category] = EARLIER(Sales[Category])), Sales[Amount])

55. Q55. Rank all cities by profit margin.

City Margin Rank = RANKX(ALL(Sales[City]), [Margin %], , DESC)