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AI-generated content may be incorrect.SQL ASSESSMENT WORKBOOK V2 Step-3: Partnership Review – Error Rates, Tier Misalignment, Geographic Issues**

**EduFin SQL Skill Assessment Workbook: Step 3 Evaluation**

**Program: Skill AI Path – Data Analyst Pretraining Track  
Module: EduFin Risk Analytics Simulation  
Assessment Type: SQL Query Writing + Business Understanding  
Prepared For: EduFin Data Analyst Cohort  
Organization: Krishnav Tech | Skill AI Path**

**Objective**

To assess learners’ ability to:

* Identify **institutions with highest data error rates**.
* Evaluate **partnership tiers vs. actual performance**.
* Detect **geographic patterns of systemic discrepancies**.
* Provide **SQL-driven insights for immediate review**.

# SQL Skill Check Assessment – Pretraining Workbook

## PART A: Query Writing (60 points)

**Q1 (10 pts)**   
Write a query to identify the top 5 partners by total exposure and show their default rates, concentration percentages, and risk classifications.

**Your Answer:**

**Q2 (10 pts)**   
Calculate partner concentration metrics using the Herfindahl-Hirschman Index (HHI) to measure partnership diversification risk.

**Your Answer:**

**Q3 (10 pts)**   
Create a query to find partners whose recent 6-month default rate exceeds their historical 2-year average by more than 3 percentage points.

**Your Answer:**

**Q4 (10 pts)**   
Build a partner risk scoring system that combines default rate, exposure concentration, processing efficiency, and partnership maturity into a weighted score.

**Your Answer:**

**Q5 (10 pts)**   
Identify partner-customer segment combinations that show unusually high default concentrations (>2 standard deviations above mean).

**Your Answer:**

**Q6 (10 pts)**   
Create an executive dashboard query showing partner risk prioritization with specific business actions for each risk tier.

**Your Answer:**

## PART B: Multiple Choice (40 points)

**Q7:** What does partner concentration risk measure?

- A) How many partners you have

- B) What percentage of portfolio each partner represents

- C) Partner default rates

- D) Processing times

**Answer:**

**Q8:** Why use HAVING COUNT(\*) >= 10 in partner analysis?

- A) Improves query performance

- B) Ensures statistical significance

- C) SQL requirement

- D) Reduces data size

**Answer:**

**Q9:** What is the Herfindahl-Hirschman Index (HHI) used for?

- A) Measuring default rates

- B) Calculating processing times

- C) Measuring market concentration

- D) Partner scoring

**Answer:**

**Q10:** In partner risk scoring, which should have the highest weight?

- A) Processing time

- B) Partnership age

- C) Default rate

- D) Loan volume

**Answer:**

**Q11:** What does STDEV() function calculate?

- A) Average value

- B) Standard deviation

- C) Maximum value

- D) Median value

**Answer:**

**Q12:** How do you detect partners with deteriorating performance?

- A) Compare recent vs historical metrics

- B) Count total defaults

- C) Check partnership start date

- D) Calculate exposure amounts

**Answer:**

**Q13:** What indicates a partner needs immediate review?

- A) New partnership only

- B) High volume only

- C) High default rate + high exposure

- D) Long processing time only

**Answer:**

**Q14:** Why use NULLIF() in default rate calculations?

- A) Improves performance

- B) Prevents division by zero

- C) Required by SQL standard

- D) Formats output

**Answer:**

**Q15:** What does LAG() function help identify in partner analysis?

- A) Partner names

- B) Exposure amounts

- C) Performance trends over time

- D) Risk categories

**Answer:**

**Q16:** In weighted risk scoring, what should total weights equal?

- A) 0

- B) 1 (100%)

- C) 10

- D) 100

**Answer:**

## Passing Criteria

* Minimum score: **80/100**
* Query section: **≥ 48/60**
* MCQ section: **≥ 32/40**
* Time: **90 minutes**

## Skills Validated

Upon achieving 80%, you will have demonstrated:

- ✅ Partner exposure aggregation and concentration analysis

- ✅ Default rate calculations and performance comparisons

- ✅ Multi-dimensional risk heatmap creation

- ✅ Complex business rule implementation in SQL

## STUDY RECOMMENDATIONS

1. **Master concentration risk calculations** - critical for identifying dangerous partnerships

2. **Practice multi-dimensional risk scoring** - you'll combine multiple risk factors

3. **Understand statistical validation** - essential for reliable partner assessment

4. **Get comfortable with trend analysis** - detecting performance deterioration patterns

5. **Practice executive summary formatting** - leadership needs clear, actionable insights

**Time Investment:** Allow 5-6 hours for complete mastery before assessment.

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