

## Excel

### Financial Functions, Logical Functions

Q1) How do you calculate loan payments using the PMT function?

A) PMT Function (Loan Payments)

The PMT function calculates the periodic payment amount for a loan based on constant payments and a constant interest rate.

\* Syntax: =PMT(rate, nper, PV)

\* Example: For monthly payments on a \$10,000 loan at 5% annual interest for 3 years,

$$=PMT(5\%/12, 3*12, -10000)$$

Q2) What is the difference between the NPV and IRR functions?

A) NPV vs IRR :-

Both measure investment profitability but from different angles.

NPV (Net present value) :- Calculates the total value of future cash flows in today's dollars, minus the initial investment. A positive NPV means the project is profitable.

IRR (Internal Rate of Return) :- Calculates the percentage rate of return that makes the NPV of all cash flows equal to zero. It represents the Break-even interest rate.

Q3) Explain how the FV function is used to calculate the future value of an investment.

A) The FV function determines the future value of an investment based on a constant interest rate and periodic payments.

\* Syntax: =FV(rate, nper, Pmt, [PV])

\* Usage: Useful for seeing how much a monthly saving plan (e.g. \$200/month) will grow over 10 years

Q4) How would you use the IF Function to perform conditional calculations?

A) The IF function returns one value if a condition is true and another if it is false

Syntax: =IF(logical-test, Value\_if\_true, Value\_if\_false)

Example: =IF(A1>70, "Pass", "Fail") checks if a score is above 70

Q5) What are nested IF statements, and how can they be applied?

A) Nested IF Statements:

A nested IF is simply an IF Function placed inside another IF function to test multiple conditions.

\* Application: used for grading scales or tiered pricing (e.g., if score > 90 "A", else if > 80 "B", etc)

Q6) How do you use the AND and OR functions in combination with IF?

A) AND and OR with IF

These logical functions allow you to test multiple criteria within a single IF statement.

**AND**: Returns true only if all conditions are met

`IF(AND(A1>10, B1>10), "Both High", "One Low")`

**OR**: Returns true if at least one condition is met.

`IF(COR(A1="Red", A1="Blue"), "Valid Color", "invalid")`

Q7) What is the purpose of the IFERROR function, and how does it work?

A) IFERROR Function

The IFERROR function catches errors (like #DIV/0!, OR #N/A) and returns a custom result instead of the error code

Syntax: =IFERROR(Value, value\_if\_error)

Example: =IFERROR(A1/B1, 0) returns 0 if B1 is zero.

Q8) Explain the difference between the ISNUMBER and ISTEXT Functions.

A) ISNUMBER vs ISTEXT

These are "Information Function" that return TRUE or FALSE Based on the cell content

`ISNUMBER`: checks if a cell contains a numeric value

`ISTEXT`: checks if a cell contains text (strings)

Q9) How would you use the `CUMIPMT` function in Excel?

A) `CUMIPMT` Function:

The `CUMIPMT` function calculates the cumulative interest paid on a loan between two specific periods (e.g., the total interest paid in Year 2).

Syntax: `=CUMIPMT (rate, nper, pv, start-period, end-period, type)`

Q10) Can you describe a scenario where the `SLN` function would be useful?

A) `SLN` Function (straight-line depreciation):

The `SLN` Function calculates the depreciation of an asset - for one period using the straight-line method

\* Scenario: Useful for accounting when you buy equipment (e.g., a \$5,000 laptop) and want to spread the cost evenly over over its 5-year useful life, minus its salvage value.