



Al-Mustaqbal University
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Microsoft Excel

Lec 5 + 6

Logical Functions



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Logical Functions in Excel

Logical functions in Excel are used to evaluate conditions and return either TRUE or FALSE.

They help in making decisions, analyzing data, and automating task



What Are Logical Functions?

Logical functions are formulas that check whether a condition is true or false.

Why Use Logical Functions

Logical functions help in decision making, automate repetitive tasks, classify data based on conditions, and simplify data analysis in Excel

IF Function

The IF function evaluates a condition and returns one value if the condition is TRUE and another if it is FALSE.

Syntax:

IF(logical_test, value_if_true, value_if_false)

D	C	B	A	
	النتيجة	قِيم B	قِيم A	1
	=IF(A2>B2;"نعم";"<")		12	2
	IF(logical_test; [value_if_true]; [value_if_false])			3
		66	14	4
		25	25	5
		35	78	6
		49	52	7
		67	95	8
		25	45	9
		85	22	10
أكاديمية				11
حسوب				12

IF Function – Examples

Example 1: Check if a student passes:

`IF (A2>=50, "Pass", "Fail")`

Example 2: Give a discount if sales exceed \$1000:

`IF (B2>1000, "Discount", "No Discount")`

AND Function

The **AND** function returns TRUE only if all conditions are TRUE.

Example:

AND(A2>=50,B2>=75) – student passes if both score and attendance meet criteri

OR Function

The **OR** function returns TRUE if at least one condition is TRUE.

Example:

OR(A2>90,B2>90) – condition is TRUE if either value is above 9

