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**SUBJECT: TWSL-QTB**

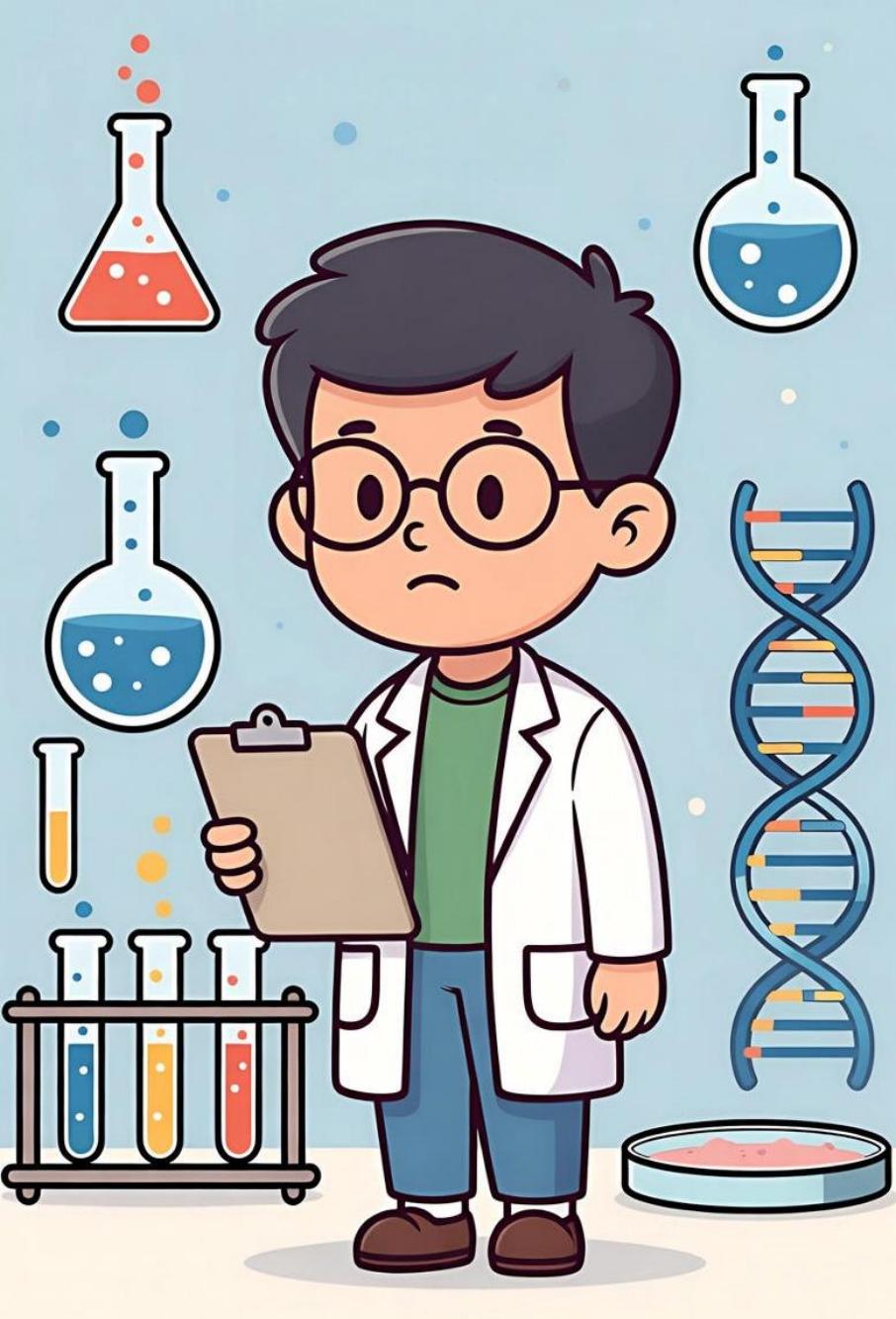
**GROUP NO: 23**



# **NULL AND ALTERNATIVE HYPOTHESIS**

## MEANING OF HYPOTHESIS

- A statement that can be tested.
- Gives a direction to research.
- Helps in decision-making based on data.



## NULL HYPOTHESIS ( $H_0$ )

- ASSUMES NO EFFECT, NO DIFFERENCE.
- RESEARCH TRIES TO REJECT  $H_0$ .
- EXAMPLE: 'THERE IS NO DIFFERENCE IN SALES BEFORE AND AFTER ADVERTISING.'

# ALTERNATIVE HYPOTHESIS (H1)

- Assumes there is an effect or difference.
- Accepted when H0 is rejected.
- Example: 'Advertising increases sales.'

H1

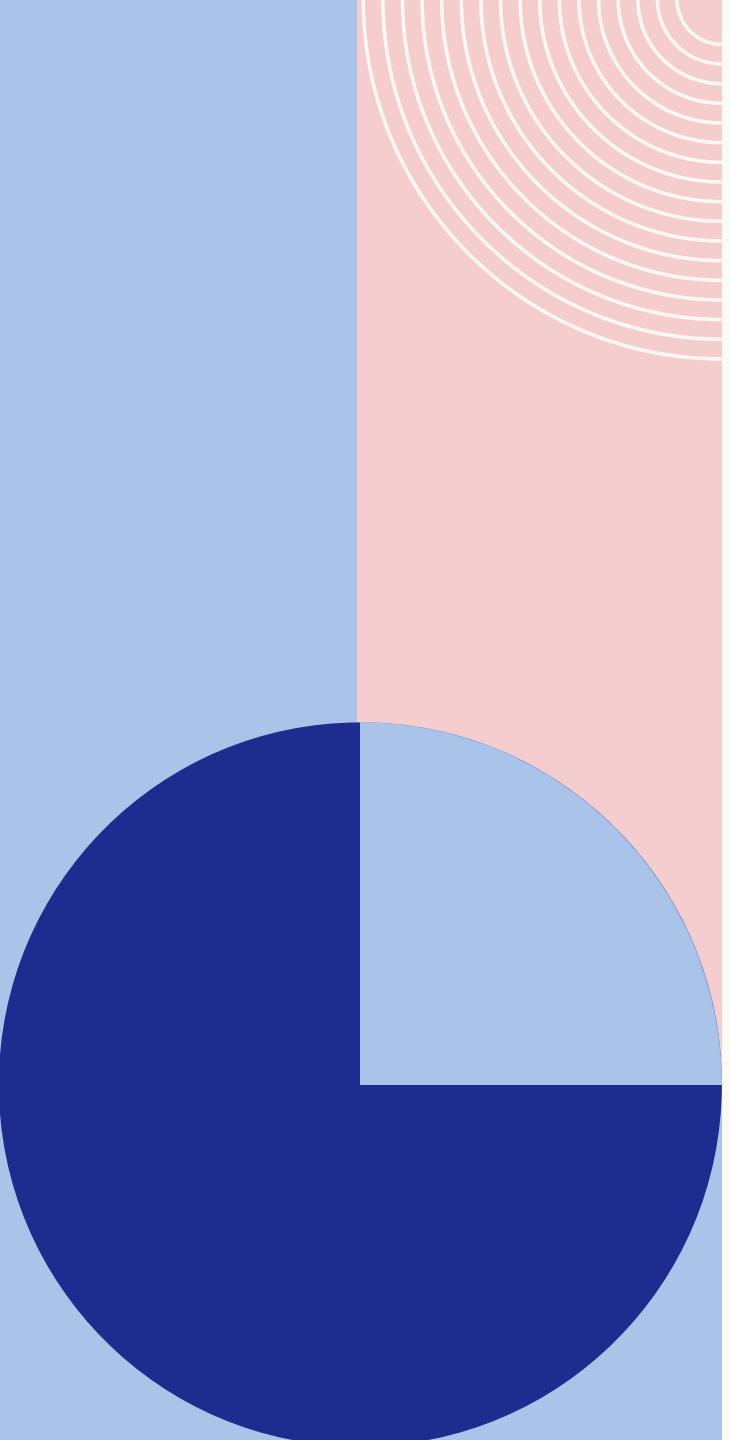
# **TYPES OF ALTERNATIVE HYPOTHESIS**

## **1. \*\*One-Tailed (Directional)\*\***

- Example: 'Boys score higher than girls.'

## **2. \*\*Two-Tailed (Non-directional)\*\***

- Example: 'There is a difference in scores between boys and girls.'



## REAL-LIFE BUSINESS EXAMPLE

**Company launches a new training program.**

- H<sub>0</sub>: The training program does not improve employee performance.
- H<sub>1</sub>: The training program improves employee performance.

# DIFFERENCE BETWEEN H<sub>0</sub> AND H<sub>1</sub>

## H<sub>0</sub>

- **BASIS :** H<sub>0</sub>(NULL HYPOTHESIS)
- **MEANING :** ASSUMES NO EFFECT,  
NO DIFFERENCE
- **NATURE :** NEGATIVE
- **SYMBOL :** H<sub>0</sub>

## H<sub>1</sub>

- **BASIS :** H<sub>1</sub> (ALTERNATIVE HYPOTHESIS)
- **MEANING :** ASSUMES AN EFFECT,  
A DIFFERENCE
- **NATURE :** POSITIVE
- **SYMBOL :** H<sub>1</sub>

# STEPS IN HYPOTHESIS TESTING

1. Define  $H_0$  and  $H_1$ .
2. Select significance level (e.g., 5%).
3. Choose testing method.
4. Collect data.
5. Compare test results.
6. Accept or reject  $H_0$ .

# CONCLUSION

- Hypothesis testing helps make scientific decisions.
- $H_0$  assumes no difference;  $H_1$  assumes difference.
- Research aims to gather evidence to reject  $H_0$ .

**THANK  
YOU**