



**PES University, Bangalore**

(Established under Karnataka Act No. 16 of 2013)

**UE19CS203 – STATISTICS FOR DATA SCIENCE**

**Unit-4 - Hypothesis and Inference**

**Assignment**

**Hypothesis Testing: Introduction**

- 1) The manager of the Resort Hotel stated that the mean guest bill for a weekend is Rs.6000 or less. A member of the hotel's accounting staff noticed that the total charges for guest bills have been increasing in recent months. The accountant will use a sample of weekend guest bills to test the manager's claim.

- a. Which form of the hypotheses should be used to test the manager's claim? Explain.

$$H_0: \mu \geq 6000$$

$$H_0: \mu \leq 6000$$

$$H_0: \mu = 6000$$

$$H_a: \mu < 6000$$

$$H_a: \mu > 6000$$

$$H_a: \mu \neq 6000$$

- b. What conclusion is appropriate when  $H_0$  cannot be rejected?  
c. What conclusion is appropriate when  $H_0$  can be rejected?

- 2) Define Null hypothesis and alternative hypothesis with an example.