# CENTRE FOR DISTANCE AND ONLINE EDUCATION
# SRI SRI UNIVERSITY, CUTTACK

### BACHELOR OF BUSINESS ADMINISTRATION
## TUTOR MARKED ASSIGNMENT

**Course Code: BBC 103**          **Academic Year: 2025-26**
**Course Name: STATISTICS FOR BUSINESS DECISION**     **Session: August 2025**
**Semester: 1st**          **Total Marks: 100**

**A. Answer any eight questions (essay type). Answer in about 350-500 words each.**

(10 X 8 = 80)

1. Discuss the role of statistics in business decision-making. How do descriptive statistics help managers interpret data effectively?

2. Explain the various measures of central tendency and dispersion. In what business situations might each be most appropriately used?

3. Evaluate the importance of graphical and tabular presentation of data in summarizing both qualitative and quantitative variables. Provide suitable examples.

4. Compare and contrast random and non-random sampling methods. Under what circumstances is each preferred in business research?

5. What is the Central Limit Theorem? Explain its significance in statistical inference, particularly in constructing confidence intervals.

6. Explain the logic of hypothesis testing in business analytics. Differentiate between one-tailed and two-tailed tests and discuss the importance of Type I and Type II errors.

7. Discuss the assumptions and interpretation of simple linear regression. How does it help in making inferences about business data?

8. Critically examine the problems encountered in multiple regression analysis such as multicollinearity, heteroscedasticity, and autocorrelation. How can these problems be addressed?

9. Explain the components of a time series. How can trend, seasonal, cyclical, and irregular variations influence forecasting in business environments?

10. Discuss the application of time series analysis in forecasting. What methods are commonly used and how can businesses benefit from accurate forecasts?

**B. Write short notes on any four. Answer in about 150-200 words each.**

(5 X 4 = 20)

1. Write a short note on the functions and importance of statistics in business decision-making.

2. Explain the different measures of central tendency and highlight their relevance in summarizing data.

3. Write a short note on the Central Limit Theorem and its implications in statistical inference.

4. Describe the logic of hypothesis testing and differentiate between Type I and Type II errors.

5. Write a short note on the assumptions of simple linear regression and the significance of the coefficient of determination.

6. Discuss the components of a time series and explain how time series analysis is useful in forecasting.