DS2003-Advance Statistics **ASSIGNMENT – III** **12-05-2023**

Instructions:

PRINT the document on A4 size pages for solving the assignment.
PROVIDE the information required below and attach this page at the start of your assignment.
USE ONLY blue/black pen for solving the assignment.
SOLVE the assignment on plain white A4 size pages.
SUBMIT your assignment in your respective classes:
17/05/2023 (BDS-4C)
18/05/2023 (BDS-4A)

Assignments submitted after the DUE DATE will not be accepted.
Please FOLLOW all the instructions carefully.

OBTAINED MARKS

Submitted To:_____

Submitted By: _____
Name of the student

Roll Number: _____
e.g. 16L-1234

Section: _____
e.g. CS-A

Submission Date: _____
e.g.02-09-2018

Question No.	***1***	***Instructions Followed***
Total Marks ***15***	***15***	***Yes/No***

Q.1

Case Problem 1 Consumer Research, Inc.

Consumer Research, Inc., is an independent agency that conducts research on consumer attitudes and behaviors for a variety of firms. In one study, a client asked for an investigation of consumer characteristics that can be used to predict the amount charged by credit card users. Data were collected on annual income, household size, and annual credit card charges for a sample of 50 consumers. The following data are on the CD accompanying the text in the data set named Consumer.

Managerial Report

1. Use methods of descriptive statistics to summarize the data. Comment on the findings.
2. Develop estimated regression equations, first using annual income as the independent variable and then using household size as the independent variable. Which variable is the better predictor of annual credit card charges? Discuss your findings.
3. Develop an estimated regression equation with annual income and household size as the independent variables. Discuss your findings.
4. What is the predicted annual credit card charge for a three-person household with an annual income of $40,000?
5. Discuss the need for other independent variables that could be added to the model. What additional variables might be helpful?

6. Perform an analysis of residuals and discussed your findings and recommendations