(2 hours)

[Total Marks: 50]

N. B.: (1) **All** questions are **compulsory**.
    (2) Make **suitable assumptions** wherever necessary and **state the assumptions** made.
    (3) Answers to the **same question** must be **written together**.
    (4) Numbers to the **right** indicate **marks**.
    (5) Draw **neat labeled diagrams** wherever **necessary**.
    (6) Use of **Non-programmable** calculators is **allowed**.

1. Attempt *any two* of the following: 10
a. What are the consideration while confronting a key decision of whether or not to conduct Business Research?
b. What are demand characteristics? How can you mitigate the influence of demand characteristics?

c. What are scale characteristics? Explain the four levels of scale measurements giving examples of each.
d. Explain the technique of Ordinary Least-Squares (OLS) method of regression Analysis.

2. Attempt *any two* of the following: 10
a. Explain the significance of the following with respect to data and information delivery:
    1. Pull Technology
    2. Push Technology
    3. Smart agent software
    4. Cookies
    5. Intranet

b. State and describe the characteristics for determining how useful the data may be.
c. Explain the levels at which a Business Researcher operates for Theory Development.
d. Explain the Rights of the Research Participant when using Placebo for Experimental designs.

3. Attempt *any two* of the following: 10
a. Explain the major sources of errors in Survey Research.
b. What are self-administered questionnaires? Explain the advantages and disadvantages of Internet Survey.
c. Explain the techniques of measuring physiological observation.
d. What is internal validity? How does it relate to selection and maturation.

4. **Attempt _any two_ of the following:** 10
a. Explain the significance of the following with respect to scale measurement.
   1. Reliability
   2. Validity
   3. Sensitivity

b. State and explain the different types of fixed alternative questions.
c. What is the purpose of taking a sample? Compare random sampling and systematic (non-sampling) errors.
d. Give the distinction among population, sample and sampling distributions. Explain the central-limit theorem in detail.

5. **Attempt _any two_ of the following:** 10
a. Define coding. Explain the coding of unstructured and structured qualitative responses.
b. Explain the use of cross-tabulation technique to reveal relationships between variables.
c. As a researcher you are required to find if gender has anything to do with political party preference.

A poll of 440 voters in a simple random sample is used to find out which political party they prefer.

The results of the survey are shown in the table below:

	Republican	Democrat	Independent	Total
Male	100	70	30	200
Female	140	60	20	220
Total	240	130	50	440

Perform a Chi-Square test of independence, to see if gender is linked to political party preference.

d. Explain the importance of the following in interpretation of regression output.
   1. F-value and p-value
   2. Coefficient of determination

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