

**GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, ODISHA, GUNUPUR
(GIET UNIVERSITY)**

B. B. A (Fourth Semester) Examinations, April 2025

23BBAPC24001 –Research Methodology



Time: 3 hrs

Maximum: 60 Marks

(The figures in the right hand margin indicate marks.)

PART – A

(2 x 10 = 20 Marks)

Q.1. Answer **ALL** questions

- | | | |
|---|-----|----|
| a. Define Research. | CO1 | K1 |
| b. Explain the Objective of research. | CO1 | K2 |
| c. Discuss the Methods of data collection. | CO2 | K1 |
| d. Find the arithmetic mean of the numbers 4,8,12,and 16. | CO2 | K1 |
| e. Explain the Statistical tools for data analysis. | CO3 | K3 |
| f. Write on One-tailed test and two tailed test. | CO3 | K2 |
| g. Explain Sampling with example. | CO4 | K1 |
| h. Explain Hypothesis. | CO4 | K1 |
| i. Explain the Scaling techniques. | CO5 | K2 |
| j. Explain about Reporting writing. | CO5 | K2 |

PART – B

(8 x 5 = 40 Marks)

Answer *all* the questions

- | | | | | | | | | | | | | | |
|-------|--|-----|-----|----|-----|----|----|-------|----|-----|--|--|--|
| 2. a. | Discuss about business research. | 8 | CO1 | K2 | | | | | | | | | |
| | (OR) | | | | | | | | | | | | |
| b. | Explain the Types of research. | 8 | CO1 | K4 | | | | | | | | | |
| 3.a. | Describe Research Process | 8 | CO2 | K2 | | | | | | | | | |
| | (OR) | | | | | | | | | | | | |
| b. | Illustrate A sample of 314 Penn State students was asked if they have ever taken an online course. Their genders were also recorded. The contingency table below was constructed. Use a chi-square test at the 5% significance level of independence to determine if there is a relationship between gender and whether or not someone has taken an online course. | 8 | CO2 | K3 | | | | | | | | | |
| | <table border="1"> <tr> <td></td> <td>Yes</td> <td>No</td> </tr> <tr> <td>Men</td> <td>43</td> <td>63</td> </tr> <tr> <td>Women</td> <td>95</td> <td>113</td> </tr> </table> | | Yes | No | Men | 43 | 63 | Women | 95 | 113 | | | |
| | Yes | No | | | | | | | | | | | |
| Men | 43 | 63 | | | | | | | | | | | |
| Women | 95 | 113 | | | | | | | | | | | |
| 4.a. | Illustrate A mechanic is making engine parts with axle diameter of 0.700 inches. A random sample of 10 parts. Shows a mean diameter of 0.742 inches with a standard deviation of 0.040 inches. Compute the statistic you would use to test whether the work is meeting the specification at the 5% significance level | 8 | CO3 | K3 | | | | | | | | | |
| | (OR) | | | | | | | | | | | | |
| b. | Explain the Procedure of ANOVA test | 8 | CO3 | K4 | | | | | | | | | |
| 5.a. | Describe Hypothesis regression region | 8 | CO4 | K2 | | | | | | | | | |

(OR)

- b. Discuss about type I error and type II error

8

CO5

K2

(OR)

- 6.a. Write a short note: a) Point estimation. b) Interval Estimation

8

CO5

K2

(OR)

- b. Discuss about Mann-Whitney U test and Kruskal Wallis H test

8

CO5

K2

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