

Gandhi Institute of Engineering and Technology University, Odisha, Gunupur (GIET University)

B.B.A. (Fourth Semester - Regular) Examinations, April – 2026

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

- | | CO # | Blooms
Level |
|--|------|-----------------|
| a. What is meant by research design? | CO1 | K1 |
| b. Define hypothesis and state its importance in research. | CO1 | K1 |
| c. What is sampling in survey research? | CO2 | K1 |
| d. What is a frequency distribution? | CO2 | K1 |
| e. Define mean and median. | CO3 | K1 |
| f. Find the median of the data: 5, 1, 3, 2, 4 | CO3 | K2 |
| g. Find the mode of the data: 3, 7, 7, 2, 9, 7, 5 | CO4 | K2 |
| h. Write the relationship among mean, median and mode. | CO4 | K2 |
| i. If regression coefficient $b_{yx}=2$, mean of $X = 3$, mean of $Y = 5$, find the regression equation of Y on X . | CO5 | K2 |
| j. Find the mean of the following data: | CO5 | K2 |

x	2	4	6
f	3	2	5

PART – B**(8 x 5 = 40 Marks)**Answer **all** the questions

- | | Marks | CO # | Blooms
Level | | | | | | | | | | | | | | |
|--|-------|------|-----------------|----|----|----|---|-----------|----|----|----|----|----|----|--|--|--|
| 2. a. Explain the research process in detail, including all its major steps.
(OR) | 8 | CO1 | K2 | | | | | | | | | | | | | | |
| b. What is a research proposal? Explain its components such as objectives, hypothesis, methodology, and time frame. | 8 | CO1 | K2 | | | | | | | | | | | | | | |
| 3.a. Explain different sampling techniques used in survey research.
(OR) | 8 | CO2 | K2 | | | | | | | | | | | | | | |
| b. Explain the concept of scaling techniques in research. Discuss different types of scales used for data collection. | 8 | CO2 | K2 | | | | | | | | | | | | | | |
| 4.a. Explain different types of data and methods of data presentation using charts and diagrams.
(OR) | 8 | CO3 | K2 | | | | | | | | | | | | | | |
| b. Discuss the measures of central tendency (mean, median, mode) and their importance in data analysis. | 8 | CO3 | K2 | | | | | | | | | | | | | | |
| 5.a. A sample of size 64 has mean 52. The population mean is 50 and population SD is 8.
At 5% level of significance, test whether the sample mean differs significantly from the population mean.
(OR) | 8 | CO4 | K3 | | | | | | | | | | | | | | |
| b. A sample of 10 observations has mean = 25 and standard deviation = 4. Test the hypothesis that population mean = 20 at 5% significance level. | 4 | CO4 | K3 | | | | | | | | | | | | | | |
| c. A die is thrown 120 times and results are: | 4 | CO4 | K3 | | | | | | | | | | | | | | |
| <table border="1" style="display: inline-table; vertical-align: top;"> <tr> <td>Face</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr> <tr> <td>Frequency</td><td>10</td><td>20</td><td>25</td><td>30</td><td>15</td><td>20</td></tr> </table> | Face | 1 | 2 | 3 | 4 | 5 | 6 | Frequency | 10 | 20 | 25 | 30 | 15 | 20 | | | |
| Face | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | | | | | | |
| Frequency | 10 | 20 | 25 | 30 | 15 | 20 | | | | | | | | | | | |
| Test whether the dice is unbiased. | | | | | | | | | | | | | | | | | |
| 6.a. What are non-parametric tests? Explain any one of them in detail.
(OR) | 8 | CO5 | K2 | | | | | | | | | | | | | | |
| b. Explain the criteria of a good estimator in detail. | 8 | CO5 | K2 | | | | | | | | | | | | | | |

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