

CARMEL COLLEGE OF ARTS, SCIENCE & COMMERCE
FOR WOMEN, NUVEM – GOA

M.COM PART (SEMESTER-I) EXAMINATION, FEBRUARY 2022

COC 122 : BUSINESS STATISTICS & RESEARCH METHODOLOGY

Duration: 3 Hours

Max Marks: 60

Instructions:

- 1. This paper consists of Nine Questions carrying equal marks.**
- 2. Question no.1 consists of 5 compulsory questions of 2 marks each.**
- 3. Answer any 5 questions from question 2, 3, 4, 5, 6, 7, 8 and 9.**
- 4. Each question carries 10 marks. Figures to the right indicate marks.**

1. Answer the following short questions.

5X2= 10 M

- a) Briefly explain Null Hypothesis and Alternate Hypothesis.
- b) Why is Multiple Submission an ethical concern in research?
- c) Give any two points of difference between primary and secondary data.
- d) Explain Falsification and Fabrication of research data.
- e) What is bivariate data? Explain with the help of an example.

- 2. The following data is provided of the price a product and its supply . You are required to calculate Karl Pearson's Coefficient of Correlation for the following data. Comment on the strength of association between the two variables. (10)**

X (Price)	11	10	9	8	7	6	5
Y (Supply)	20	18	12	8	10	5	4

- 3. In a primary school having over 100 students, a few students were selected randomly and their heights in centmetres were recorded as follows:
52, 60, 64, 66, 73, 75, 48, 50, 70, 55
Calculate the Standard Deviation of their heights. (10)**
- 4. How would you plan your research report writing? Explain the various types of report formats. (10)**
- 5. Write a note on Exploratory Factor Analysis (EFA) and Structural Equation Modelling (SEM). (10)**
- 6. Explain any FOUR types of research. (10)**
- 7. Write a note on Validity and Reliability (10)**

8. The data of a random sample of 1000 male workers and 1500 female workers and their weekly average wages is given below (10)

Gender	Mean Score	Standard Deviation	Number
Males	47	28	1000
Females	49	40	1500

Is the difference between their average weekly wages significant?

9. A survey pertaining the weight of Penguins was conducted and the following data was obtained. You are required to calculate the mean, median and mode value and comment if the data is normally distributed, positively skewed or negatively skewed. (10)

Weight (in pounds)	Frequency
0-10	1
10-20	2
20-30	4
30-40	5
40-50	8
50-60	3
60-70	1
