

Vivekanand Education Society’s Institute of Technology

NAME: NARENDER KESWANI

ROLL NO: 24

DIVISION: B

DEPARTMENT: MASTER OF COMPUTER APPLICATION (M.C.A)

SUBJECT: MCA11 - Mathematical Foundation for Computer Science 1 (MFCS)

EXAM: CONTINOUS ASSESTMENT (CA)

PROFESSOR: RUCHI RAUTELA (RR)

DATE: 04/03/2022

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| **Vivekanand Education Society’s Institute of Technology, Chembur, Mumbai**  **Department Of MCA**  **Year:2021-22 (Odd Sem)**  **Assignment 1** |

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| **Class : FIRST YEAR MCA** | **Division: A & B** |
| **Semester: I** | **Subject: Mathematical Foundation for Computer Science 1** |
| **Assignment: 1** | **Topic: Statistics & Probability** |
| **Each question carries 5 marks.** | |

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| Q1 | Calculate Karl Pearson’s coefficient of skewness for the following data: | CO1 |
| Q2 | A sample of 12 fathers and their eldest sons gave the following data  about their height in inches :  Father: 65 63 67 64 68 62 70 66 68 67 69 71  Son : 68 66 68 65 69 66 68 65 71 67 68 70  Calculate coefficient of rank correlation. | CO2 |
| Q3 | The probability that an electric component will fail in less than 1200 hrs of continuous use is 0.24. Using normal distribution, find probability that among 200 such components fewer than 45 will fail in less than 1200 hrs of continuous use. | CO4 |
| Q4 | The level of calcium in the blood of healthy, young adults varies with a mean of 9.5 mg per deciliter and a SD of 0.4. A clinic measures the blood calcium level of 180 healthy women and finds x = 9.57mg. Is this an indication that the mean calcium level in this population differs from 9.5mg?( Z𝞪 = 1.96) | CO5 |