

**FIRST INTERNAL EXAMINATION - SEPTEMBER 2024**

**COMMERCE - III SEMESTER B.COM (NEP)**

**3.2.1: BUSINESS MATHEMATICS AND STATISTICS**

**Time: 1 Hour 15 Minutes Max. Marks: 30**

**Instruction:** *Answer should be written completely in English*

**SECTION – A**

1. **Answer any 3 questions. Each question carries 2 marks. (3 x 2=06)**
2. Define Correlation.
3. State any two essentials of good average.
4. Calculate Median, if Mean = 12 and Mode = 13
5. Find Mean, if CV is 40% and variance is 144.
6. If bxy = 0.8 and byx = 0.6, then find ‘r’.

**SECTION – B**

**Answer any 3 questions. Each question carries 4 marks. (3 x 4=12)**

1. Calculate Mode for the following data

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Wages** | Above 0 | Above 10 | Above 20 | Above 30 | Above 40 | Above 50 | Above 60 | Above 70 |
| **No. of Labourers** | 650 | 500 | 425 | 375 | 300 | 275 | 250 | 100 |

1. Find Mean and Median from the following data.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Marks | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
| No. of Students | 4 | 5 | 3 | 2 | 5 | 2 | 3 | 1 | 2 |

1. Calculate Spearman’s Co-efficient of Correlation for the following data.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Marks in Statistics | 48 | 60 | 72 | 62 | 56 | 40 | 39 | 52 | 30 |
| Marks in Maths | 62 | 78 | 65 | 70 | 38 | 54 | 60 | 32 | 31 |

1. Calculate the standard deviation.

Values : 73,16,10,80,90,40,15,10,60,46

**SECTION – C**

**Answer any 1 question. Each question carries 12 marks. (1x 12=12)**

1. Calculate Mean, Median and Mode for the following data.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Class** | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 |
| **Frequency** | 12 | 17 | 21 | 18 | 13 |

1. Calculate Karl Pearson’s Co-efficient of Correlation

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | 10 | 28 | 49 | 50 | 70 | 75 | 98 | 100 | 110 | 120 |
| B | 112 | 110 | 75 | 60 | 55 | 50 | 40 | 30 | 20 | 10 |

1. Find which of the following batsmen is more consistent in scoring.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Batsman A | 5 | 7 | 16 | 27 | 39 | 53 | 56 | 61 | 80 | 101 | 105 |
| Batsman B | 0 | 4 | 16 | 21 | 41 | 43 | 57 | 78 | 83 | 90 | 95 |



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**SYLLABUS**