

**272511**  
**S-59 (A)-N**  
**B.A. / B.Sc. (Second Semester)-NEP**  
**EXAMINATION, 2024-25**

**STATISTICS**

**Bivariate Statistical Methods and Probability Theory)**  
**[SOS/Stat/Add/IS-109]**

*[ie : Two Hours]*

*[Maximum Marks: 70]*

: (i) खण्ड 'अ' के सात प्रश्नों में से किन्हीं पांच प्रश्नों के और खण्ड 'ब' के छः में से किन्हीं तीन प्रश्नों के उत्तर दीजिये।

Attempt any five questions from Section A and any three questions from Section B.

(ii) खण्ड 'अ' के प्रत्येक प्रश्न का उत्तर 50 शब्दों तक सीमित रखें।

Answer each question of Section A within 50 words.

(iii) अपने सभी प्रश्नों के उत्तर आपको दी गयी उत्तर पुस्तिका में ही दीजिये। अतिरिक्त उत्तर पुस्तिका नहीं दी जायेगी।

Limit your answers within the given answer book.

Additional answer book (B-Answer book) should not be provided or used.

[P.T.O.]

खण्ड-आ

## (Section-A)

नोट: किन्हीं पाँच प्रश्नों के उत्तर दीजिए। प्रत्येक प्रश्न 5 अंकों का है।

Attempt any five questions. Each question carries 5 marks.

Attempt any five

$5 \times 5 = 25$

1. Explicate Poisson distribution and its properties.
2. Define attributes and variables.
3. Explain the fitting of straight line by least square method.
4. Discuss the consistency of data. How do you check it.
5. Write do you understand by correlation coefficient.
6. Write about: (A) Ultimate class frequencies (B) order of a class.
7. Given  $(A)=90$ ,  $(AB)=40$ ,  $N=150$ , and  $(b)=80$  complete contingency table.

ખાણ્ડ-બ  
(Section-B)

1. Explain Rank correlation, calculate the correlation coefficient for the following heights (in inches) of father (A) and Son (B)

A : 65	66	67	67	68	69	70	7
B: 67	68	65	68	72	72	69	7

2. What do you understand by association of attributes also discuss types of association of attributes.

3. Explain binomial distribution. Show that if  $np$  be a whole number, the mean of the binomial distribution coincides with the greatest term.

4. Write a short notes on:

- (i) Independence of attributes
- (ii) Fitting of parabola by least sq. methods.

5. Write a short notes on :

- (a) Uniform Distribution
- (b) Regression Coefficient