



RAN-2408000602021011

B.Com. (NCF-NEP) Examination November - 2025 Statistics For Data Analytics - II

[Total Marks: 35]

સૂચના : / Instructions

- (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the above details on your answer book

Seat No.:

--	--	--	--	--	--

Student's Signature

Q.1. Answer the following (Any Five)

10

- What is variable?
- If first four central moments are 0, 6, 6 and 70.8 then find β_2 .
- If $P(A) = 0.32$ then $P(A') = ?$
- Explain: Random experiment
- A and B are two independent events and $P(A) = \frac{1}{3}$, $P(B) = \frac{3}{5}$, $P(A \cap B) = \underline{\hspace{2cm}}$.
- If $p(x = 3) = p(x = 4)$ for poisson distribution then find parameter.
- Find Q_1 , if the normal distribution has $Q_3 = 40$ and mode = 25.

- Q.2. A. There are 5 white, 4 red and 3 black balls in a bag. 3 balls are taken at random from it. Find the probabilities that

7

- All the three balls are black,
- All the three balls are of the same colour,
- All the three balls are of different colour.

- B. The mean of a frequency distribution is 5 and its second, third and fourth central moments are respectively 15, -20 and 400. Find the first four row moments from central moments.

6

OR

- Q.2. A. Two cubic dice are thrown simultaneously, find the probabilities that

7

- The sum is 9,
- the sum is at least 9,
- the sum is 10,
- the sum is 13,
- the sum is at the most 12.

- B. Obtain first four central moments and also γ_1 and γ_1 .

6

x	5	6	7	8	9	10	11
f	2	9	25	35	20	8	1

- Q.3. A. A basketball team has a 70% probability of winning a game against an opponent. They play 4 matches.

6

- What is the probability that the team wins exactly 3 matches?
- What is the probability that the team wins at least 2 matches?

- B. The average score is 42 and the standard deviation of score is 24. Assuming normal distribution for the scores, find 6
- a. The number of candidates whose scores exceeds 58.
 - b. The number of candidates whose scores lies between 30 and 60.

OR

Q.3. Write short note on any three from the following questions: 12

1. Define the terms with example:
 - I. Exhaustive events
 - II. Equally likely events
 2. Define Normal distribution? Write its characteristics.
 3. State difference between Probability Mass Function & Probability Density Function.
 4. What is the meaning of probability and conditional probability.
 5. Explain Binomial distribution.
-