

RAN-2408000601060024
B.Com. Data Analytics (Sem.-I) Examination April - 2026
SEC - Mathematics for Data Analytics
[Total Marks: 25]

સૂચના : / Instructions (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fill up strictly the above details on your answer book (2) Figures to the right side indicate full marks of the questions. (3) Graph papers and statistical tables would be supplied on request. (4) Non-scientific calculator can be used.	Seat No.: Student's Signature
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Q.1. Answer the following questions. (Any Five)
10

1. Solve the equation : $\frac{5x}{2} + 3 = \frac{21}{2}$.
2. How many different words can be made out of the letters in the word ALLAHABAD
3. Define: Intersection of two set
4. If ${}^nP_3 = 720$ then find n.
5. What is Simultaneous Equation?
6. Define: Composite Statement.
7. State truth table for $p \vee q$.

Q.2. A. Let $U = \{1, 2, 3, 4, 5, 6, 7\}$, $A = \{2, 4, 6\}$, $B = \{3, 5\}$ and $C = \{1, 2, 4, 7\}$, find

- i. $A' \cup (B \cap C')$
- ii. $(B - A) \cup (A - C)$

05

B. In how many ways can a team of 3 boys and 3 girls be selected from 5 boys and 4 girls?

05

C. For sets $P = \{a, b, c, d\}$ and $Q = \{c, d, e, f, g\}$ find $P \cup Q$ and $P - Q$.

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OR

Q.2. A. Prove the following Associative Laws with using truth table:

08

- i. $(p \vee q) \vee r = p \vee (q \vee r)$
- ii. $(p \wedge q) \wedge r = p \wedge (q \wedge r)$

B. Solve the following equation by using method of Cross Multiplication

07

$$3x + 2y + 25 = 0$$

$$2x + y + 10 = 0.$$