

## PART 1 - MATHEMATICS

Topic : Probability (class 12)

## SECTION-B : (Maximum Marks : 4)

This section contains **ONE** question.

The answer to each question is a **NON-NEGATIVE INTEGER**.

For each question, enter the correct integer corresponding to the answer in the place designated to enter the answer.

Answer to each question will be evaluated according to the following marking scheme :

Full Marks : +4 If **ONLY** the correct answer is entered;

Zero Marks : 0 In all other cases.

1. A bag contains  $N$  balls out of which 3 balls are white, 6 balls are green, and the remaining balls are blue. Assume that the balls are identical otherwise. Three balls are drawn randomly one after the other without replacement. For  $i = 1, 2, 3$ , let  $W_i$ ,  $G_i$ , and  $B_i$  denote the events that the ball drawn in the  $i^{\text{th}}$  draw is a white ball, green ball, and blue ball, respectively. If the probability  $P(W_1 \cap G_2 \cap B_3) = \frac{2}{5N}$  and the conditional probability  $P(B_3 | W_1 \cap G_2) = \frac{2}{9}$ , then  $N$  equals \_\_\_\_\_. [JEE Advanced 2024 Paper 2]

Scan or tap for the  
full solution



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Space for Rough Work

JEE ADVANCED PROBABILITY (CLASS 12) —  
CONDITIONAL PROBABILITY — PYQS

Test Pattern : JEE (Advanced)

ANSWER KEY

| SECTION-B |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------|----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Ques.     | 1  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ans.      | 11 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |