

EXAM FOR PROBABILITY & STATISTICS (6PAS1)
WINTER SEMESTER 2025/2026

QUESTIONS SET NO. 3

1. Formulate and prove the inclusion-exclusion principle. Does the same principle hold for infinite sets?
2. Compute the correlation between the random variables X and Y , if their joint probability function is given by the following table. Also compute the correlation between X^2 and Y^2 .

	X	
	0	1
Y	-1	7/30
	0	4/30
	1	1/30