

THAPAR INSTITUTE OF ENGINEERING AND TECHNOLOGY, PATIALA

Department of Electronics and Communication Engineering

UEC310 - Information and Communication Theory

TUTORIAL - 5

Q1	Let X be a discrete random variable with $P_X(k) = 15$ for $k = -1, 0, 1, 2, 3$. Let $Y = 2 X $. Find the range and PMF of Y .
Q2	In the experiment of rolling a fair die, let the random variable X be the resulting number. Find mean and variance of this random variable.
Q3	For a random variable X and real numbers a and b , show that $Var(aX + b) = a^2Var(X)$