[1] In a gathering of 50 students, 20 major in Engineering and the remaining 30 major in CS. If four students are selected randomly from the gathering, find the probability that all four of them major in Engineering.

.. P[Scleening 4 Students all major in Engineering]
$$= \frac{(20)}{4} = \frac{20 \times 19 \times 18 \times 17}{50 \times 49 \times 48 \times 47}$$

[2] A company manufactures 100 products a day. It is known that 1% of products manufactured by the company are defective, and the products are independently manufactured. Find the probability that the company manufactures no more than 2 defective products on any given day.

$$P[X \le 2]$$

$$= P(x=0] + P[x=1] + P[x=2]$$

$$= P(x) + P(x) + P_{x}(2)$$

$$= P_{x}(0) + P_{x}(1) + P_{x}(1)$$

$$= P_{x}(0) + P_{x}(1)$$

$$= P_{x}(0) + P_{x}(1)$$

$$= P_$$