P1:

A company has two plants to manufacture scooters. Plant I manufactures 80 percent of the scooters and plant II manufactures 20 percent. At plant I, 85 out of 100 scooters are rated standard quality or better. At plant II, only 65 out of 100 scooters are rated standard quality or better.

(i)   What is the probability that scooter selected at random came from plant, I if it is known that the scooter is of standard quality?

(ii)   What is the probability that the scooter came from plant II, if it is known that the scooter is of standard quality?