**Module B.2: Basic Statistical Concepts**

**Homework 2**

Q 1. There are two factories that produce bulbs – factory A and B. The probability of a defective bulb out of factory A is 0.94 and that of one from factory B is 0.98. The net probability of a bulb being defective from a given pile is 0.93. 40% of the bulbs out of that pile are made in factory A and the rest in factory B. If a bulb out of that pile is found defective, what are the odds that it was manufactured in factory A?

Q 2. The probability distribution function *p(x)* for a Standard Normal random variable *x (µ = 0, σ = 1)* is –



Find the probability that the variable *x = 0.29.*