1. Examine the following normal Quantile plots carefully. Which of these plots indicates that the data
2. Ans= C
3. Ans= D
4. Ans= A
5. Ans=B

2. For each of the following statements, indicate whether it is True/False. If false, explain why.

(i) Before using a normal model for the sampling distribution of the average package weights, the manager must confirm that weights of individual packages are normally distributed.

Ans= False, As the sample size is small (25), so here t-distribution will be applied, not normal distribution. For any distribution with mean μ and variance σ2, the sampling distribution of the mean approaches a normal distribution with a mean (μ) and a variance σ2/n as n.

(ii) The standard error of the daily average SE( ̅) = 1.

Ans= Yes, its true, 5/sqrt(25)=1

3. Auditors at a small community bank randomly sample 100 withdrawal transactions made during the week at an ATM machine located near the bank’s main branch. Over the past 2 years, the average withdrawal amount has been $50 with a standard deviation of $40. Since audit investigations are typically expensive, the auditors decide to not initiate further investigations if the mean transaction amount of the sample is between $45 and $55. What is the probability that in any given week, there will be an investigation?

Ans= 50%

a1<- pnorm(45,50,40)

a2<-(1-pnorm(55,50,40))

4. The auditors from the above example would like to maintain the probability of investigation to 5%. Which of the following represents the minimum number transactions that they should sample if they do not want to change the thresholds of 45 and 55? Assume that the sample statistics remain unchanged.

Ans= D (250)

qnorm(.05,10,40)