**CS1 Paper B – November 2024 Examination**

**Codes to be directly copied in R Script**

**Q. 1 – ii)**

0.07991847, 0.82064314, 0.33683219, 0.93005953, 0.31919393, 0.92695533,0.76263949, 0.51740370, 0.49224880, 0.46354694, 0.89832157, 0.21920729, 0.20471780, 0.19055074, 0.69137537

**Q. 2 – ii)**

claims<-data.frame(

Year1 = c(14.2,58.6,123),

Year2 = c(15.8,63.1,132),

Year3 = c(22.7,81.0,161),

Year4 = c(19,64.2,133)

)

nopols<-data.frame(

Year1 = c(163,4435,16184),

Year2 = c(189,4761,17443),

Year3 = c(252,5576,20102),

Year4 = c(199,4581,18000)

)

n <- ncol(claims)

N <-nrow(claims)

X <- claims/nopols

Xibar <-rowSums(claims) / rowSums(nopols)

Pibar <- rowSums(nopols) #………………… **A**

Pbar <-sum(Pibar)

Pstar <-sum(Pibar \* (1-Pibar/Pbar))/(N\*n-1) #………………… **B**

m <-sum(claims) / Pbar #…………………… **C**

s <- mean(rowSums(nopols \*(X-Xibar)^2)/(n-1)) #……………… **D**

v <- (sum(rowSums(nopols\*(X-m)^2))/(n\*N-1)-s)/Pstar #………………… **E**

**Q. 4)**

exam.success = matrix(c(132,120,27,51),ncol=2,nrow=2)