Đề 1:

Câu 1:

a)

> KQ<-edit(data.frame())

#Nhập giá trị như đề bài

b)

> KQ$TH1[is.na(KQ$TH1)]<-mean(KQ$TH1,na.rm=T)

> KQ$TH2[is.na(KQ$TH2)]<-mean(KQ$TH2,na.rm=T)

> KQ$HT1[is.na(KQ$HT1)]<-mean(KQ$HT1,na.rm=T)

c)

> TH<-c(KQ$TH1,KQ$TH2,KQ$HT1)

> barplot(TH ,ylab="DiemTB",col=rainbow(10),main="Ket qua hoc tap")

c)(đề 4)

> plot(KQ$TH1,type="o",col="red",xlab="Sinh vien",ylab="DiemTB",

+ ylim=range(c(4,10)),main="Ket qua hoc tap")

> lines(KQ$TH2,type="o",col="blue")

> lines(KQ$HT1,type="o",col="green")

> legend("bottomright", c("TH1","TH2","HT1"),fill=c("red","blue","green"),horiz=F)

Câu 2:

a)

> dl<-edit(data.frame())

#Nhập giá trị như đề bài

b)

> n<-sum(dl$ni)

> dl$xi<-(dl$x1+dl$x2)/2

> Xbar<-sum(dl$xi\*dl$ni)/n

> s2<-sum((dl$xi-Xbar)^2\*dl$ni)/(n-1)

> s<-sqrt(s2)

> alpha<-1-0.97

> Zstar<-qnorm(1-alpha/2,0,1)

> er<-Zstar\*s/sqrt(n)

> Xbar-er; Xbar+er

[1] 156.5974

[1] 168.6803

c)

> na<-sum(dl$ni[dl$xi>195])

d)

> pmu<-na/n

> alpha<-1-0.98

> Zstar<-qnorm(1-alpha/2,0,1)

> er<-Zstar\*sqrt(pmu\*(1-pmu)/n)

> pmu-er; pmu+er

Câu 3:

a)

> H0: mu1 - mu2 = 0; H1: mu1 - mu2 <> 0; alpha = 0.05

b) Dùng miền bác bỏ

> n<-32

> Xbar<-180

> sig12<-14^2

> m<-40

> Ybar<-170

> sig22<-10^2

> alpha<-0.05

> z0<- (Xbar-Ybar)/sqrt(sig12/n+sig22/m)

> zstar<-qnorm(1-alpha/2)

> abs(z0) > zstar

[1] TRUE

> # bac bo H0, chap nhan H1

> # Luong trung binh cua 2 xi nghiep la khac nhau

Trường hợp mẫu nhỏ

> n<-32

> Xbar<-180

> sig12<-14^2

> m<-40

> Ybar<-170

> sig22<-10^2

> alpha<-0.05

> s2<-((n-1)\*sig12+(m-1)\*sig22)/(n+m-2)

> T0<- (Xbar-Ybar)/sqrt(s2\*(1/n+1/m))

> tstar<-qt(1-alpha/2,n+m-2)

> abs(T0) > tstar

[1] TRUE

> # bac bo H0, chap nhan H1

> # Luong trung binh cua 2 xi nghiep la khac nhau

Đề 3

Câu 2:

a)

> dta<-edit(data.frame())

b)

> #H0: mu<=mu0; H1: mu>mu0 ; mu0=65; alpha=0.01

> dta$k1<-(dta$cd+dta$ct)/2

> n<-sum(dta$ts)

> Xbar<-sum(dta$k1\*dta$ts)/n

> s2<-sum((dta$k1-Xbar)^2\*dta$ts)/(n-1)

> s<-sqrt(s2)

> mu0<-65

> alpha<-0.01

> z0<-(Xbar-mu0)/(s/sqrt(n))

> zstar<-qnorm(1-alpha)

> z0>zstar

[1] TRUE

> #Bac bo H0 chap nhan H1

> #Viec bon phan co mang lai hieu qua

Đề 4

Câu 3:

a)

> Xi<-c(28,28,24,30,60,30,32,42,43,49)

> Yi<-c(5,6,5,6,10,5,7,8,9,10)

c)

> cor(Xi,Yi)

[1] 0.9386696

> cor.test(Xi,Yi)

> #alternative hypothesis = true nen Xi va Yi co hoi quy tuyen tinh

d)

> plot(Yi~Xi)

> reg<-lm(Yi~Xi)

> abline(reg)