Test Assignment Hypothsis

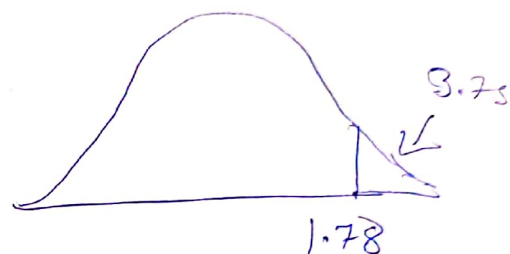**Q.2** $H_0 = 52$ Null hyp.

$H_1 \neq 52$ Alt. hyp.

where, $\bar{X} = 52.80$

$n = 100$

$S = 4.50$

$\mu = 52$

$t = \dfrac{\bar{X} - \mu}{S/\sqrt{n}} \Rightarrow \dfrac{52.80 - 52}{4.50/\sqrt{100}}$

$\Rightarrow \dfrac{.80}{.045} = 1.78$

3.75

1.78

at 5% level of sign. $= \pm 1.96$

$t = 1.78$ we accept the null hypothesis.

Q.3 $H_0 = 34$ Null   leve of Sign 1%.

$H_1 \neq 34$ Alt.

where;

$\mu = 34$

$n = 50$

$\bar{X} = 32.5$

$S = 8$

$t = \dfrac{\bar{X} - \mu}{S/\sqrt{n}} \Rightarrow \dfrac{32.5 - 34}{8/\sqrt{50}} = \dfrac{-1.5}{1.13} \Rightarrow -1.32$

A

Q.1.

Q.4 for 1 tail test two population are given

$P_1 = N_1 = 300$, $\overline{X}_1 = 120$, $S_1 = \cdot53$

$P_2 = N_2 = 700$, $\overline{X}_2 = 140$, $S_2 = \cdot20$

$H_0 = P_1 - P_2 = 10\%$ ie $\cdot10$

$H_1 : P_1 - P_2 \neq 10\%$ ie $\cdot10$

$$t = \frac{(S_1 - S_2)\ H_0}{\sqrt{\dfrac{\dfrac{S_1(1-S_1)}{n_1} + \dfrac{S_2(1-S_2)}{n_2}}{n_1} + \dfrac{}{n_2}}}$$

$$= \frac{(\cdot53 - \cdot20) - \cdot10}{\sqrt{\dfrac{\dfrac{\cdot53(1-\cdot53)}{300}}{} + \dfrac{\cdot20(1-\cdot20)}{700}}}$$

$$\frac{\cdot23}{\sqrt{\dfrac{\cdot2491}{300} + \dfrac{\cdot16}{700}}} \Rightarrow \frac{\cdot23}{\cdot0288 + \cdot0)5)}$$

$$\Rightarrow \frac{\cdot23}{\cdot0439}$$

$$\Rightarrow 5\cdot239$$

Q.5 Chi-Sq. = 14.96

α < .05

O	E	O-E	$(O-E)^2/E$
41	25	16	10.24
19	25	-6	1.44
24	25	-1	.04
16	25	-9	3.24 dof = 4-1 = 3
			14.96

at .05 Sig. 3 dof = 7.82

$X^2 = 14.96$

$\chi^2_{crit.} = 7.82$

Mo, voter does not prefer eq. Cad.

Q.6 $H_0 = \mu_1 = \mu_2 = \mu_2 = \mu = $ mean

$H_1 = $ any one is diff.

total no. of sample n = 15

dof = 15-3 = 12 level. of sig. 5%, i.e, .05

$\frac{}{} = \frac{0.7}{}$ $H_0 \leq 145$ - Null

$H_1 \not\geq 145$ - Alt.

.05 lve. sign. $= 1.64 = 2$

$S = 20$

$n = 200$

$\bar{X} = 147$

$\mu = 145$

$Z = \frac{\bar{X} - \mu}{S/\sqrt{n}} = \frac{147 - 145}{20/\sqrt{200}}$

$= \frac{2}{20/14.14} = \underline{1.41}$

Value $= 1.41$ which is small the 1.64 Null hyp.
accepted

Q.8

$H_0 = 145$

$H_1 \not\geq 145$

$S = 100$

$n =$

$\bar{X} = 147$

$\mu = 145$

$Z = \frac{147 - 145}{100/\sqrt{n}} = \frac{2}{}$

(a) $H_0 = 72$ = Null

$H_1 \neq 72$ = Alt.

(b) Random samp.

$$\frac{70 + 69 + 73 + 68 + 71 + 69 + 71}{7}$$

$$= 70.142$$

$\overline{X} = 70.143$

$S = 1.67$ => $t = \dfrac{70.143 - 72}{1.67/\sqrt{7}}$

$\mu = 72$

$n = 7$ $= \dfrac{-1.857}{.632} =$

$$= -2.938$$

(c) P-value $= .021$ is les then 10% so nul hyp.
is rejected. & $.021$ is greate then $.01$ then null
hy is accepted.