

Assignment F Test

①

Q. Hy. br. \rightarrow 156, 278, 134, 202, 236, 198, 187, 199, 143, 165, 223
mum br. \rightarrow 345, 332, 309, 367, 388, 312, 355, 363, 381

$$H_0: \sigma_H^2 = \sigma_m^2 - \text{Null}$$

$$H_1: \sigma_H^2 \neq \sigma_m^2 - \text{Alt.}$$

lets take sig. level is 5% i.e. .05
variance for sample 1's

$$S_H^2 = 1828.56$$

$$S_m^2 = 795.19$$

$$\text{Now } f\text{-test } f = \frac{S_H^2}{S_m^2} = \frac{1828.56}{795.19} = \underline{\underline{2.30}}$$

Q. 2

(2)

<u>Q.3</u>		PSD(σ)	SSD(S)
	M	30	35
	M	50	45

$$F = \frac{\left(\frac{S_1^2}{\sigma_1^2} \right)}{\left(\frac{S_2^2}{\sigma_2^2} \right)} \Rightarrow \frac{\frac{35^2}{30^2}}{\frac{45^2}{50^2}} \Rightarrow \frac{1.361}{.81} = \underline{\underline{1.68}}$$

$$v_1 \text{ dof} = 7 - 1 = 6$$

$$v_2 \text{ dof} = 12 - 1 = 11$$

Q.4 for cum. prob.

$$\text{dof for women} = 7 - 1 = 6 \text{ pretesters}$$

$$\text{dof} = 12 - 1 = 11$$

the cum. probability is .78

Q.5 $H_0 = \mu_{\text{mid}} = \mu_{\text{suu}} = \mu_{\text{pick}} \quad \alpha = .01$
 $H_1 \neq \mu_{\text{mid}} \neq \mu_{\text{suu}} \neq \mu_{\text{pick}}$

	N	M	SD
M	31	25.8	2.56
S	31	22.68	3.67
P	14	21.29	2.76