

8.) Based on the age and weight as given below:-

ID	Age	Sex - Y/N	Weight	Take - Vit
1	20	N	180	Y
2	30	N	150	N
3	33	N	175	N
4	46	N	163	N
5	41	N	190	N
6	48	N	171	Y
7	45	N	136	N
8	50	N	188	N
9	52	N	164	N
10	55	N	170	N
11	21	Y	136	Y
12	22	Y	155	Y
13	24	Y	160	Y
14	27	Y	142	N
15	30	Y	170	Y
16	32	Y	125	Y
17	33	Y	151	N
18	34	Y	134	Y
19	37	Y	115	Y
20	48	Y	170	Y

1. Feed the data in SPSS and in Σ og 7N1 and take - vit code Yes = 1 and No = 2
2. Prepare distribution table for jogging and taking vitamins.
3. Test whether jogging and taking vitamins are independent by using chi square
4. Find correlation between age and weight and interpret.

Q2) A pharmaceutical company develops a drug which it claims to increase Hemoglobin content of blood. It is measured before and after administration of drug. On the basis of following data, determine whether the company claim is valid.

Subject: 1 2 3 4 5 6 7 8 9 10

Before: 10 9 11 12 8 7 12 18 10 9

After: 12 11 13 14 09 10 12 14 11 12

Answer:-
Hypothesis (H₀): Any don't increase hemoglobin content
H₁: Hemoglobin increases

Q3) A drug was prescribed for a random sample of 12 patients complaining of insomnia. An independent random sample of 16 patients with same complaint received.

Drug B the no. of hours of sleep experienced during second night after treatment began as follows:-

A - 3.5, 5.7, 3.4, 6.9, 17.8, 3.8, 8.0, 6.4, 6.8, 3.6, 6.9, 5.7.

B - 4.5, 11.7, 10.8, 4.5, 6.3, 3.8, 6.2, 6.6, 4.7, 1.1, 6.4, 4.5, 5.1, 3.2, 4.7, 4.5, 3.

Test whether the drug A is superior to B in increasing sleep hours?

Q1) A numerical ability test was given to 10 boys and 10 girls each. Their scores are given below. What test will you apply? Is there significant difference between the means of the two groups.

	Numerical Ability Scores									
	67	24	57	55	63	54	56	68	33	4
Boys										
Girls	76	38	58	58	56	67	68	77	42	4

Q5) 20 pigs are assigned a random among four experimental groups. The data are pigs body weight in kg after being fed a different diet. Test whether pigs weights are the same for all four diets. If the difference is found significance then suggest which is a better feed.

FEED 1	FEED 2	FEED 3	FEED 4
60.8	68.7	102.6	87.9
57	67.7	102.1	84.2
65	74	106.2	83.1
58.6	66.3	96.5	85.78
61.7	69.8	99.2	90.3

ANSWER:-

Sol:- There is no significant difference in diets.

86) An investigator predicts that fit the type A behavior pattern (highly competitive, like considered) will have higher scores on questionnaire measure for need of achievement than individuals fit the type B pattern (absence of type A qualities). Higher scores reflect greater levels of need of achievement. Test whether there is significant difference in the scores at 5% LOS.

ANSWER :-
H₀: There is no significant difference between two behaviors.

H_a: There is significant difference between two behaviors.

8-1) Test the hypothesis that there is no difference between the quality of four kind of tyres A, B, C, D based on the data given below. Use 5% level of significance.

Kilometres.	Tyre Brand			
	A	B	C	D
Failed to last 4000 km.				
lasted from 4000 to 6000 km				
lasted more than 6000 km.				