



students yield examination result as average score of 72.4 with a standard deviation of 14.8. A random sample of 100 evening class students yield examination result as average score of 73.9 with a standard deviation of 17.9. Are the average score of morning and evening classes equal at 5% level of significance?

- b) A principal of the college thought that memory power training is better for learning process of students, then memory power training were lunched. The memory capacity of the students were noted before and after training. The data recorded as:

Is the training effective at 5% level of significance?

Before Training	56	42	36	47	49	42	60	72	63
After training	147	125	118	128	145	140	155	160	149

6. a) In an experiment to study the dependence of hypertension smoking habits, the following data were taken on 180 individuals.

Cases	Non smokers	Moderate smokers	Heavy smokers
Hypertension	21	36	30
No Hypertension	48	26	19

Test the hypothesis that presence or absence of hypertension is independent of smoking habits. Use  $\alpha=0.05$ .

- b) Write the properties of correlation coefficient and regression coefficient.
7. Write short notes on: (**Any two**)

- a) Normal distribution
- b) Central limit theorem
- c) Properties of good estimator