

Assignment

Semester-7

Minor Subject: Inferential Statistics-1

	Unit-1: Introduction of Testing of Hypothesis														
Q-1	Explain the following terms: (i) Standard error of a statistics (ii) Parameter and Statistics (iii) Level of significance (iv) Define testing of Hypothesis														
Q-2	Explain: Type I and Type II error and power.														
Q-3	How AI is used in real business world.														
	Unit-2: Estimation And Introduction to the tools of AI														
Q-1	What is confidence interval? Give its assumption and limitation.														
Q-2	In a survey of 200 people, 80 like Amul. Find 95% Confidence Interval for proportion who like Amul.														
Q-3	Sample of 36 students mean marks 65, sample SD is 12. Find 95% Confidence Interval.														
	Unit-3 Large Sample Test-I														
Q-1	Average monthly wage of 400 workers is Rs. 2000. Population SD is Rs. 300. Can it be said average wage of all workers is Rs. 2100? Test at 5%.														
Q-2	In a sample of 100 boys, mean height 68 inches SD 3 inches. In sample of 150 girls, mean height 65 inches SD 2.5 inches. Test if difference in mean height is significant?														
Q-3	The information regarding two groups is given below: <table border="1" data-bbox="311 1215 1321 1331"><tr><td></td><td>Mean</td><td>S.D</td><td>Sample Size</td></tr><tr><td>Group I</td><td>83</td><td>10</td><td>100</td></tr><tr><td>Group II</td><td>81</td><td>12</td><td>80</td></tr></table> Examine whether the variabilities of the two groups differ significantly ($\alpha=0.05$)				Mean	S.D	Sample Size	Group I	83	10	100	Group II	81	12	80
	Mean	S.D	Sample Size												
Group I	83	10	100												
Group II	81	12	80												
	Unit-4 Large Sample Test-II														
Q-1	In a sample of 600 people, 400 are vegetarians. Can we say that 70% population is vegetarian? Test at 5%.														
Q-2	In two factories: Factory A: 100 items, 20 defectives. Factory B: 200 items, 60 defectives. Test if difference in defective proportion is significant at 5%?														
Q-3	Machine A: 1000 items, 10% defective Machine B: 1500 items, 12% defective Is Machine B worse than Machine A at 5%? (One tailed test - table value 1.645)														