

NON-PARAMETRIC TESTS

1. Given below are measurements on 20 ear heads of a variety of wheat. Apply a suitable nonparametric test to judge whether the median length (θ) of ear heads of the said variety can be taken as 9.9 cm.

Length of Ear heads (in cm)

| | | | | | | | | | |
|------|-----|------|------|-----|------|------|------|------|------|
| 9.3 | 8.8 | 10.7 | 11.5 | 8.2 | 9.7 | 10.3 | 8.6 | 11.3 | 10.7 |
| 11.2 | 9.0 | 9.8 | 9.3 | 9.9 | 10.3 | 10.0 | 10.1 | 9.6 | 10.4 |

2. Apply a suitable nonparametric test to judge whether the medians of two populations, from which the samples given below have been drawn, are equal.

Sample I : 12.46, 12.43, 12.77, 11.89, 12.12, 12.33, 12.76, 11.85, 12.56, 11.95, 12.24, 12.65, 12.78, 12.28, 12.13

Sample II : 12.05, 12.38, 12.22, 12.45, 12.44, 12.39, 11.97, 12.37, 12.21, 12.64

3. Scores on a clerical aptitude test administered to a batch of Secretariat and Directorate clerks are given below. Test whether the two groups have the same score distribution in the population.

Scores

| Secretariat Clerks | Directorate Clerks |
|--------------------|--------------------|
| 40 | 47 |
| 35 | 56 |
| 52 | 42 |
| 60 | 57 |
| 46 | 50 |
| | 58 |
| | 62 |