

2018
CBCS
3rd Semester
STATISTICS
PAPER—GE3P
(Honours)
(Practical)
Full Marks : 20

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Basics of Statistical Inference Lab.

Answer any *three* out of five questions.

1. The mean yield per plant for 11 tomato plants of a particular variety was found to be 1,284.73 gm with a standard deviation of 96.41 gm. Set up 99% confidence limits to the mean yield of all plants of this variety. Also obtain 99% confidence limits to the population standard deviation of yield of plants. 5
2. A six-faced die was thrown 300 times, and the number of points obtained at each throw was recorded. In this way, the following frequency distribution was formed. Use these data to test whether the die was unbiased.

Number of points per throw	1	2	3	4	5	6
Frequency	31	52	46	40	54	77

5

3. Using a suitable non-parametric test, test the hypothesis that the median length (θ) of ear-head of a variety of wheat is $\theta_0 = 9.9$ cm against the alternative that $\theta \neq 9.9$ cm, with $\alpha = 0.05$ on the basis of the following 20 ear-head measurements :
- 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.

5

4. Information relating to weight at birth (in lb.) of boys at a number of primary schools is given below. Analyze the one-way classified data.

School	:	A	B	C	D	E	F
No. of boys	:	112	69	128	97	62	78
Mean weight per boy	:	6.132	6.261	6.345	6.112	6.320	5.927

Standard deviation (divisor used is sample size)	:	0.763	0.812	0.752	0.733	0.835	0.743
--	---	-------	-------	-------	-------	-------	-------

5

5. A 5-foot specimen of a new type of fibre is found to have 13 defects, while the manufacturer claims that there are no more than 150 defects per 100 feet. Do the above data support this claim?

5

Laboratory Note Book — 02

Viva-Voce — 03