2019

3rd Semester Examination

STATISTICS (Honours)

Paper - GE 3P

(Basics of Statistical Inference)

Full Marks : 20 Time : 3 Hours

The figures in the margin indicate full marks.

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

Answer all questions

1. A random sample of size 10 was taken from a normal population, whose variance is known to be 7·056 sq. inches. If the observations are (in inches) 65, 71, 64, 71, 70, 69, 64, 63, 67 and 68, test the hypothesis that the population mean is 69 inches. Also obtain 95% confidence limits for the population mean. 5

2. 5 identical coins are tossed 320 times, and the no. of leads appearing each time is recorded. The results are.

[Turn Over]

No. of Heads	0	1	2	3	4	5	Total
Frequency	14	45	80	112	61	8	320

Would you conclude that the coins are biased ? 5

3. The tensile strength of portland cement is being studied. The following data have been collected.

Mixing technique	Tensile strength (lb/sq.inch)			
1	3129	3000	2865	2890
2	3200	3300	2975	3150
3	2800	2900	2985	3050
4	2600	2700	2600	2765

Test whether the mixing techniques affect the strength of the cement. 5

4. Laboratory Note book. 2

5. Viva-voce. 3
