

U.G. 4th Semester Examination - 2021**STATISTICS****[HONOURS]****Course Code : STAT-H-CC-P-8****Survey Sampling and Indian Official Statistics-Lab.****[PRACTICAL]**

Full Marks : 25(20+5)

Time : 2 Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give answers in their own words as far as practicable.**Notations and symbols have their usual meaning.*

1. Draw a random sample of size 10 from the population given by the probability density function

$$f(x) = \frac{3x^2}{\pi^3}, 0 < x < \pi. \quad 4$$

2. An eye-estimate of the weight of peaches on each tree in an orchard of 200 trees has been done and the total weight has been eye-estimated as 12,000 lbs. For a sample of 10 trees the eye-estimates and actual weights of the production of peach have been taken.

Sl. No. of trees (sample)	1	2	3	4	5	6	7	8	9	10
Actual weight (lbs)	61	42	50	58	67	45	39	57	71	53
Eye-estimated weight (lbs)	59	47	52	60	67	48	44	58	76	58

Obtain the ratio and regression estimates of the total actual weight of peaches of all the 200 trees in the orchard and compare the precisions of the two estimates. 6

3. Practical Note Book 5
4. Viva-voce 5

(Internal Assessment : 5)

[Turn over]