

U.G. 1st Semester Examination - 2021**STATISTICS****[HONOURS]****Course Code : STAT-H-CC-P-2****(Probability and Probability Distributions I - Lab)****[PRACTICAL]**Full Marks : 25 (20+5) Time : $1\frac{1}{2}$ Hours

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

Notations and symbols have their usual meaning.

1. You are surveying people exiting from a polling booth and asking them if they voted in favour of the independent candidate. The probability that a person voted in favour of the independent candidate is 3%.
 - a) If you ask 150 persons at random, what is the probability of having not more than 3 persons to vote in favour of the independent candidate?
 - b) What is the probability that 15 persons must be asked before you can find 2 persons who

have voted in favour of the independent candidate? 4

2. Five students of Class XI are chosen at random from each of 50 Higher Secondary schools of similar standard. Their percentages of marks in Secondary Examination are noted. The following table shows the data on the number of students (X) out of 5 who obtained more than 80% marks:

X	0	1	2	3	4	5	Total
Frequency	8	17	15	7	2	1	50

Fit a binomial distribution to the above data (round off the expected frequencies to nearest integers). What is the estimate of the probability that a student selected at random obtained more than 80% marks? 6

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

[Internal Assessment: 5]

[Turn over]