

- 1) Use Yates's correlation & test whether A & B are independent. Observed frequencies are as under:

	A	Not A	Total
B	40	60	100
Not B	3	65	100
Total	75	125	200

- 2) The following data is collected on two characteristic:

	Cinemagoers	Non-cinemagoers
Literate	83	57
Illiterate	45	68

Based on this, can you conclude that there is no relation between the habit of cinema going and literacy?

Use chi-square test of goodness of fit at 5% L.O.S.

- 3) Examine the effect of vaccination on controlling the diseases. Use chi-square test for independency of attribute at 1% level of significance?

A showing vaccination and B attacked by the diseases.

	A	α
B	69	10
β	91	30

- 4) In radio listener survey 130 persons were interviewed and their opinions about preference to Hindi or English music were asked. The results are as follows.

Type of music	Hindi	English
I	12	46
II	40	25

Examine the preference for music type is dependent on language use 5% level of significance.

- 5) 200 digits are chosen at random from the digit 0 to 9. The frequencies are tabulated as under. Can we say that chance of being selected of each digit is equal?

Use chi-square test at 5% L.O.S.

Digit	:	0	1	2	3	4	5	6	7	8	9
Frequency:		18	19	23	21	16	25	20	22	21	25

- 6) The following table gives the number of aircraft accidents that are occurred the seven days of the week. Find whether the accidents are uniformly distributed over the week.

Days	:	Mon.	Tue.	Wed.	Thur.	Fri.	Sat.
No. of accidents	:	14	18	12	11	15	14

- 7) What is Chi-Square distribution? States its conditions of validity and its application.

- 8) The following figures shows the distribution of digits in numbers chosen at random from a telephone directory:

Digits	:	0	1	2	3	4	5	6	7	8	9
Frequency	:	102	110	99	96	107	96	110	97	96	87

- 9) Poisson distribution was fitted to the observed data by estimating the value of parameter λ and the following result was obtained. Test the goodness of fit at 1% level of significance.

x	0	1	2	3	4	5
O_i	103	55	26	4	2	1
E_i	109.62	67.25	24.25	6.18	0.72	0.28

- 10) A bird watcher sitting in a park has observed following type of birds: Category: 1 2 3 4 5 6 Frequency: 6 7 13 17 6 5 Does this information support the claim that the proportion of birds is 1:1:2:3:1:1. Use chi-square test of goodness of fit at 5% L.O.S.