

Register for
Certification exam

Course outline

How does an
NPTEL online
course work?

Week 1

Week 2

- Describing numerical data
- Describing numerical data (continued)
- Exercises, Association between categorical variables
- Association between categorical variables (continued)
- Association between numerical variables
- Association between numerical variables (continued)
- Assignment 2 Solution
- Practice: Week 2: Assignment 2 (Non-Graded)
- **Quiz: Week 2: Assignment 2**
- Week 2 Feedback Form: Introduction to probability and Statistics

Week 3

Week 4

DOWNLOAD
VIDEOS

Text Transcripts

Books

Week 2: Assignment 2

The due date for submitting this assignment has passed.

Due on 2023-02-08, 23:59 IST.

Assignment submitted on 2023-02-06, 21:40 IST

In an MBA class of 50 students 24 are women and 26 are men. They specialize in Finance, Marketing and Human Resources. Data is given in the Table. For Q1-Q3 follow this Hint : (If your answer is 50%, just write 50)

	Finance	Marketing	Human Resources
Men	10	12	4
Women	8	6	10

1) What percentage of students are specializing in Human Resources given that they are women?

41

Yes, the answer is correct.
Score: 1

Accepted Answers:
(Type: Range) 41,42

1 point

2) What percentage of finance students are men?

55

Yes, the answer is correct.
Score: 1

Accepted Answers:
(Type: Range) 55,56

1 point

3) What percentage of students from the class are women specializing in marketing?

12

Yes, the answer is correct.
Score: 1

Accepted Answers:
(Type: Numeric) 12

1 point

4) A manager of a cloth store collected the following data

	Shirts	T – shirts
Age 20-40	22	78
Age 40+	22	18

The manager believes that young customers buy T – shirts while the older ones buys shirts. You would agree if the actual sales are within 10% of the proportions for the two pieces of data. What is your conclusion?

The manager's assumption is

1 point

- ☐ is validated
☒ is not validated
☐ Cannot predict any conclusion from the given data

Yes, the answer is correct.

Score: 1

Accepted Answers:

is not validated

A medical center collected the following data and observed that there is an association between flu and the rainy season. They further classified their patients into children and adults and obtained the data given in table 2. For Q5-Q7 follow this Hint : (If your answer is 50%, just write 50)

	Flu	Others
Summer	22	78
Rainy season	50	20

	Flu		Others	
	Children	Adults	Children	Adults
Summer	15	7	40	38
Rainy season	20	30	14	6

5) The % of flu cases in rainy season is

71

Yes, the answer is correct.

Score: 1

Accepted Answers:

(Type: Range) 71,72

1 point

6) The % of flu cases in rainy season among children is

58

Yes, the answer is correct.

Score: 0.5

Accepted Answers:

(Type: Range) 58,59

0.5 points

7) The % of flu cases in rainy season among adults is _____

83

Yes, the answer is correct.

Score: 0.5

Accepted Answers:

(Type: Range) 83,84

0.5 points

The number of absentees in an office and the cause was tabulated and the data is as follows

	Health	Others
20 – 40	22	78
40+	50	20

8) Find the chi square value for this data? (Hint: Answer up to two decimal places)

41.2

Yes, the answer is correct.

Score: 1

Accepted Answers:

(Type: Range) 39,43

1 point

9) Find the value of Cramer's V for this data? (Hint: Answer up to two decimal places)

0.49

Yes, the answer is correct.

Score: 1

Accepted Answers:

(Type: Range) 0.45,0.55

1 point

The percentage of men and women holding stock in three different industries are as follows

	Men	Women
Advertising	36	64
Manufacturing	70	30
Investment Banking	40	60

10) Find the chi square value for this data? (Hint: Answer up to two decimal places)

27.65

Yes, the answer is correct.

Score: 1

Accepted Answers:

(Type: Range) 25.50,29.50

1 point

11) Find the value of Cramer's V for this data? (Hint: Answer up to two decimal places)

0.30

Yes, the answer is correct.

Score: 1

Accepted Answers:

(Type: Range) 0.25,0.35

1 point

Five employees were given 2 tests each and the score obtained by them were given below

	1	2	3	4	5
Test 1	42	65	70	63	80
Test 2	50	64	77	69	80

12) Find the covariance of the data.(Hint: Answer up to two decimal places)

159.20

Yes, the answer is correct.

Score: 1

Accepted Answers:

(Type: Range) 159.20,159.30

1 point

13) Find the correlation coefficient of the data. (Hint: Answer up to two decimal places)

0.96

Yes, the answer is correct.

Score: 1

Accepted Answers:

(Type: Range) 0.95,0.97

1 point

The number of errors made by five employees are given before and after training

	1	2	3	4	5
Test 1	10	4	6	9	6
Test 2	2	8	5	8	2

14) Find the covariance of the data?

0.00

-2.30

Yes, the answer is correct.

Score: 1

Accepted Answers:

(Type: Range) -2.30,-2.20

1 point

15) Find the correlation coefficient of the data

-0.31

Yes, the answer is correct.

Score: 1

Accepted Answers:

(Type: Range) -0.320,-0.30

1 point

Find the correlation for the data given

	1	2	3	4	5
X	10	14	6	9	6
Y	12	18	15	18	11

16) Find the correlation coefficient of the data

0.55

Yes, the answer is correct.

Score: 1

Accepted Answers:

(Type: Range) 0.550,0.555

1 point

If you fit a line $Y = a + bX$, compute the values of a and b using statistical measures?

17) a = _____

9.79

Yes, the answer is correct.

Score: 1

Accepted Answers:

(Type: Range) 9.79,9.99

1 point

18) b = _____

0.540

Yes, the answer is correct.

Score: 1

Accepted Answers:

(Type: Range) 0.540,0.550

1 point

