

The IIHMR University, Jaipur
MBA Pharmaceutical Management
Batch 08 (2016-2018) Second Year



Data Management and Analysis

Term Examination

Time 3 Hours

Max. Marks: 70

Instructions:

Please note that you have to answer all questions.

- Q1. As per the data sheet attached (page 1 to page 4) given with the question paper, prepare the Cross Tabulation Table based on the following two variables: (15)
- 1) Customer age and
 - 2) Payment method.
- Q2. Based on the above Cross Tabulation table, prepare a detailed report for your Marketing Head and suggest him the appropriate marketing and channel strategies for the energy drink. Also, which age segment will you choose for the targeting the strategy and why? (10)
- Q3. The following Business data analytics score is given to you: (15)
- 48, 69, 44, 9, 22, 29, 38, 44, 47, 54, 16, 54, 59, 97.
- Based on the above score, prepare the Box plot chart and compute the following:
- i. Minimum value
 - ii. Mean value
 - iii. Quartile 1 value
 - iv. Quartile 2 value
 - v. Quartile 3 value

- v. Quartile 3 value
- vi. Maximum value
- vii. Lower limit of the series
- viii. Upper limit of the series.
- ix. Interquartile range



Q4. Based on the above box plot answer the following

(10)

- a) Outlier item of the series and state reason/s why it is important to remove outlier/s from the series
- b) How similar or different are the Mean and Median of the series and in these types of computations among the two values, which value will you prefer and why?
- c) Based on the box plot, what inference you have drawn on IQR and how Q1, Q2 and Q3 are similar / different from each other and which quartile according to you is the most important quartile of the series and why?

Q5. As per given data in the sheet on page 5, to establish the relationship between the two variables, which statistical method/s you will use and why. After analyzing the statistical results, what is your conclusion and what is the nature of relationship between the two variables. Define it? (10)

Q6. Write short notes on the following probability explaining their practical application in the related business fields and also mention their formula for the Mean, Variance and Standard Deviation: (10)

- a) Binomial Distribution
- b) Poisson Distribution
- c) Normal distribution
- d) Uniform distribution

Customer Age	Product(Energy drink flavor)	Units	Price	Amount of Transaction(Revenue)	Payment Method	City Region
21	Vanilla	2	₹ 22.95	₹ 45.90	Mastercard	West
57	Strawberry	1	₹ 19.95	₹ 19.95	Mastercard	West
25	Black Currant	1	₹ 21.95	₹ 21.95	Mastercard	East
38	Strawberry	1	₹ 19.95	₹ 19.95	Cash on Delivery	West
22	Strawberry	4	₹ 19.95	₹ 79.80	Visa	West
29	Strawberry	4	₹ 19.95	₹ 79.80	Paytm	South
18	Strawberry	3	₹ 19.95	₹ 59.85	Visa	West
64	Strawberry	7	₹ 19.95	₹ 139.65	Cash on Delivery	West
27	Strawberry	6	₹ 19.95	₹ 119.70	Cash on Delivery	West
22	Black Currant	2	₹ 21.95	₹ 43.90	Visa	West
39	Black Currant	2	₹ 21.95	₹ 43.90	Paytm	Mid West
61	Strawberry	5	₹ 19.95	₹ 99.75	Mastercard	Mid West
18	Vanilla	5	₹ 22.95	₹ 114.75	Visa	Mid West
22	Vanilla	4	₹ 22.95	₹ 91.80	Paytm	West
52	Vanilla	5	₹ 22.95	₹ 114.75	Cash on Delivery	Mid West
22	Vanilla	1	₹ 22.95	₹ 22.95	Visa	West
18	Butterscotch	5	₹ 24.95	₹ 124.75	Cash on Delivery	West
55	Strawberry	1	₹ 19.95	₹ 19.95	Paytm	South
20	Black Currant	4	₹ 21.95	₹ 87.80	Paytm	East
42	Vanilla	1	₹ 22.95	₹ 22.95	Paytm	Mid West
30	Choclate	10	₹ 29.95	₹ 299.50	Paytm	South
64	Strawberry	1	₹ 19.95	₹ 19.95	Visa	Mid West
63	Strawberry	5	₹ 19.95	₹ 99.75	Paytm	Mid West
41	Strawberry	2	₹ 19.95	₹ 39.90	Mastercard	South
21	Black Currant	3	₹ 21.95	₹ 65.85	Visa	East
63	Butterscotch	1	₹ 24.95	₹ 24.95	Paytm	East
54	Black Currant	1	₹ 21.95	₹ 21.95	Cash on Delivery	West
18	Strawberry	1	₹ 19.95	₹ 19.95	Cash on Delivery	West
26	Vanilla	4	₹ 22.95	₹ 91.80	Cash on Delivery	West

Customer Age	Product(Energy drink flavor)	Units	Price	Amount of Transaction(Revenue)	Payment Method	City Region
59	Black Currant	3	₹ 21.95	₹ 65.85	Paytm	Mid West
30	Strawberry	2	₹ 19.95	₹ 39.90	Cash on Delivery	West
64	Black Currant	2	₹ 21.95	₹ 43.90	Visa	West
30	Black Currant	3	₹ 21.95	₹ 65.85	Paytm	West
41	Black Currant	2	₹ 21.95	₹ 43.90	Cash on Delivery	West
23	Strawberry	5	₹ 19.95	₹ 99.75	Mastercard	South
52	Choclate	1	₹ 29.95	₹ 29.95	Visa	West
18	Black Currant	3	₹ 21.95	₹ 65.85	Paytm	West
32	Vanilla	1	₹ 22.95	₹ 22.95	Paytm	West
22	Strawberry	1	₹ 19.95	₹ 19.95	Cash on Delivery	Mid West
29	Strawberry	5	₹ 19.95	₹ 99.75	Paytm	South
25	Pineapple	5	₹ 24.95	₹ 124.75	Mastercard	Mid West
63	Black Currant	1	₹ 21.95	₹ 21.95	Paytm	West
26	Butterscotch	7	₹ 24.95	₹ 174.65	Mastercard	Mid West
31	Choclate	1	₹ 29.95	₹ 29.95	Cash on Delivery	West
23	Choclate	5	₹ 29.95	₹ 149.75	Paytm	Mid West
42	Choclate	1	₹ 29.95	₹ 29.95	Paytm	Mid West
28	Vanilla	2	₹ 22.95	₹ 45.90	Visa	East
23	Vanilla	7	₹ 22.95	₹ 160.65	Visa	West
19	Vanilla	7	₹ 22.95	₹ 160.65	Mastercard	Mid West
37	Strawberry	6	₹ 19.95	₹ 119.70	Visa	West
38	Black Currant	2	₹ 21.95	₹ 43.90	Mastercard	East
50	Strawberry	6	₹ 19.95	₹ 119.70	Mastercard	Mid West
26	Black Currant	3	₹ 21.95	₹ 65.85	Cash on Delivery	West
33	Vanilla	1	₹ 22.95	₹ 22.95	Paytm	South
59	Black Currant	3	₹ 21.95	₹ 65.85	Paytm	Mid West
32	Black Currant	5	₹ 21.95	₹ 109.75	Visa	Mid West
27	Vanilla	5	₹ 22.95	₹ 114.75	Visa	Mid West
54	Pineapple	10	₹ 24.95	₹ 249.50	Cash on Delivery	West



Customer Age	Product(Energy drink flavor)	Units	Price	Amount of Transaction(Revenue)	Payment Method	City Region
63	Black Currant	5	₹ 21.95	₹ 109.75	Paytm	West
48	Vanilla	5	₹ 22.95	₹ 114.75	Visa	East
29	Vanilla	5	₹ 22.95	₹ 114.75	Cash on Delivery	East
38	Choclate	4	₹ 29.95	₹ 119.80	Visa	West
24	Choclate	1	₹ 29.95	₹ 29.95	Mastercard	East
51	Vanilla	5	₹ 22.95	₹ 114.75	Visa	West
25	Choclate	7	₹ 29.95	₹ 209.65	Mastercard	West
65	Vanilla	5	₹ 22.95	₹ 114.75	Visa	West
35	Strawberry	3	₹ 19.95	₹ 59.85	Paytm	Mid West
35	Butterscotch	5	₹ 24.95	₹ 124.75	Mastercard	East
21	Strawberry	2	₹ 19.95	₹ 39.90	Visa	Mid West
47	Butterscotch	5	₹ 24.95	₹ 124.75	Mastercard	West
62	Butterscotch	1	₹ 24.95	₹ 24.95	Cash on Delivery	East
63	Vanilla	1	₹ 22.95	₹ 22.95	Paytm	East
23	Pineapple	10	₹ 24.95	₹ 249.50	Cash on Delivery	Mid West
59	Strawberry	3	₹ 19.95	₹ 59.85	Visa	South
48	Black Currant	2	₹ 21.95	₹ 43.90	Visa	West
57	Strawberry	1	₹ 19.95	₹ 19.95	Mastercard	South
19	Choclate	1	₹ 29.95	₹ 29.95	Cash on Delivery	Mid West
48	Strawberry	1	₹ 19.95	₹ 19.95	Mastercard	Mid West
21	Black Currant	3	₹ 21.95	₹ 65.85	Mastercard	South
40	Vanilla	1	₹ 22.95	₹ 22.95	Cash on Delivery	West
25	Strawberry	4	₹ 19.95	₹ 79.80	Visa	Mid West
59	Strawberry	4	₹ 19.95	₹ 79.80	Mastercard	South
57	Vanilla	5	₹ 22.95	₹ 114.75	Visa	West
56	Vanilla	1	₹ 22.95	₹ 22.95	Cash on Delivery	West
19	Strawberry	1	₹ 19.95	₹ 19.95	Visa	West
54	Black Currant	5	₹ 21.95	₹ 109.75	Visa	Mid West
65	Choclate	2	₹ 29.95	₹ 59.90	Paytm	Mid West

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44	Strawberry	4	₹ 19.95	₹ 79.80	Mastercard	South
21	Pincapple	5	₹ 24.95	₹ 124.75	Paytm	East
20	Pincapple	1	₹ 24.95	₹ 24.95	Paytm	West
49	Vanilla	7	₹ 22.95	₹ 160.65	Visa	West
37	Black Currant	3	₹ 21.95	₹ 65.85	Mastercard	South
26	Vanilla	6	₹ 22.95	₹ 137.70	Paytm	West
62	Choclate	1	₹ 29.95	₹ 29.95	Mastercard	East
38	Strawberry	6	₹ 19.95	₹ 119.70	Paytm	West
55	Strawberry	1	₹ 19.95	₹ 19.95	Visa	West

Monthly Drs.Call Average	Ave.Monthly Sales('000)
8	86
14.23	101
12.32	91
9.76	90
6.22	77
15.01	98
15.8	109
14.23	96
17.4	111
4.92	50
7.96	85
6.43	68
10.1	83
15.95	99
2.99	38
15.8	109
8.34	87
4.34	112
15.86	89
16.65	96
14.87	96
7.21	84
9.1	79
11.34	82
13.98	98
4.56	77
8.32	78

