

Think Pair Share

Attempt All three snippets.

Share only PDF or word doc with detailed solution.

You can use images/ graphs/ charts to support your answers.

Be Creative while answering.

Steps to follow:

Connect with your buddy – Discuss the problem statement – Divide tasks – Be creative while framing your answers – Submit ASAP.

One person can upload

Case Snippet 1: 10 Marks

1a) A popular Two-Wheelers company claims that its best-selling model averages 18 km per litre of petrol. But recently a government agency used a sample of 80 two-wheelers of this model and finds the sample mean to be 16.8 km/litre. We also know from previous studies that the population standard deviation is 3 km/litre. Can we expect (within 2 standard errors) that we could select such a sample if indeed the population mean is 18 km/litre?

Or

1b) BeautyPlus has launched a new face wash in the market. The brand has planned to target the customers of the rival brand Dove. It has been found through several research studies that 8% of customers in the market are Dove buyers and that a high proportion, 30% of them shop at Target which is a personal care retailer. It is also known that 25% of customers of personal care products shop at Target.

The brand manager of BeautyPlus is planning to conduct a sampling programme of its product at Target. However, she thinks that doing this will only be viable if at least 15% of Target shoppers are Dove buyers. Should the brand manager go ahead with the programme?

Case Snippet 2: 10 Marks

2a) Marriott International is an American multinational diversified hospitality company that manages and franchises a broad portfolio of hotels and related lodging facilities. Every year, it provides a refresher course to its employees on "Hospitality Management and Emerging Trends". This training is being provided to all the three levels of management - Top, Middle & Bottom. The topic remains the same but the type of delivery varies with each level. The trainers believe that evaluations of the training session may vary with the audience. Few randomly selected evaluation scores from different levels of management who attended respective training sessions are given below (Here ratings are on a scale of 1 to 10 with 10 being the highest):

Top Level	Middle Level	Bottom Level
8	8	5

7	7	6
6	6	7
7	9	6
9	10	7
	9	8
		10

Assuming level of significance as 0.05, formulate the null and alternative hypotheses and determine which test statistic needs to be used. Also create a Decision Rule.

Or

2b) Two Fast Moving Consumer Goods (FMCG) companies are in close competition these days to become the undisputed leader of the industry. Both the companies produce and sell multiple lines of products. The sales performance of both the companies in the context of selling a non-alcoholic beverage is given below:

Company A

Mean Sales (One Year Average) - 5000 units

Standard Deviation - 500 units

Company B

Mean Sales (One Year Average) - 7500 units

Standard Deviation - 1000 units

Compute Coefficient of Variation (CV) for both the companies and comment on the result.

Case Snippet 3:

10 Marks

3a) The table shows the annual return of stocks under different sectors. Is there any evidence that the stock return depends on sector like industrial or consumer or service? **(Ref attachment stocks.csv)**

Or

3b) The table shows the quantity of soaps sold for different brands at different locations, collected over 20 days. Conduct a two-way ANOVA with interaction at $\alpha = 5\%$ to test the effects of brands, locations and interaction on sales. **(Ref attachment soaps.csv)**

All The Best