

PGDM (IBM), 2019-21

Business Analytics

INS-307

Trimester – III, End-Term Examination: June 2020

Time allowed: 1 Hrs 30 Min

Roll No: _____

Max Marks: 30

Case Problem 1 PLANNING AN ADVERTISING CAMPAIGN

The Flamingo Grill is an upscale restaurant located in St. Petersburg, Florida. To help plan an advertising campaign for the coming season, Flamingo's management team hired the advertising firm of Haskell & Johnson (HJ). The management team requested HJ's recommendation concerning how the advertising budget should be distributed across television, radio, and newspaper advertisements. The budget has been set at \$279,000.

In a meeting with Flamingo's management team, **HJ** consultants provided the following information about the industry exposure effectiveness rating per ad, their estimate of the number of potential new customers reached per ad, and the cost for each ad.

Advertising Media	Exposure Rating per Ad	New Customers per Ad	Cost per Ad
Television	90	4000	\$10,000
Radio	25	2000	\$ 3,000
Newspaper	10	1000	\$ 1,000

The exposure rating is viewed as a measure of the value of the ad to both existing customers and potential new customers. It is a function of such things as image, message recall visual and audio appeal, and so on. As expected, the more expensive television advertisement has the highest exposure effectiveness rating along with the greatest potential for reaching new customers.

At this point, the **HJ** consultants pointed out that the data concerning exposure and reach were only applicable to the first few ads in each media. For television, **HJ** stated that the exposure rating of 90 and the 4000 new customers reached per ad were reliable for the first 10 television ads. After 10 ads, the benefit is expected to decline. For planning purposes, **HJ** recommended reducing the exposure rating to 55 and the estimate of the potential new customers reached to 1500 for any television ads beyond 10. For radio ads, the preceding data are reliable up to a maximum of 15 ads. Beyond 15 ads, the exposure rating declines to 20 and number of new customers reached declines to 1200 per ad. Similarly, for newspaper ads, the preceding data are reliable up to a maximum of 20; the exposure rating declines to 5 and the potential number of new customers reached declines to 800 for additional ads.

Flamingo's management team accepted maximizing the total exposure rating, across all media, as the objective of the advertising campaign. Because of management's concern with attracting new customers, management stated that the advertising campaign must reach at least 100,000 new customers. To balance the advertising campaign and make use

of all advertising media, Flamingo's management team also adopted the following guidelines.

- ✚ Use at least twice as many radio advertisements as television advertisements.
- ✚ Use no more than 20 television advertisements.
- ✚ The television budget should be at least \$140,000.
- ✚ The radio advertising budget is restricted to a maximum of \$99,000.
- ✚ The newspaper budget is to be at least \$30,000.

HJ agreed to work with these guidelines and provide a recommendation as to how the \$279,000 advertising budget should be allocated among television, radio, and newspaper advertising.

Managerial Report

Develop a model that can be used to determine the advertising budget allocation for the Flamingo Grill. Include a discussion of the following in your report. **(Each question Carries equal marks)**

1. A schedule showing the recommended number of television, radio, and newspaper advertisements and the budget allocation for each media. Show the total exposure and indicate the total number of potential new customers reached. **(CILO-1; 6 marks)**
2. How would the total exposure change if an additional \$10,000 were added to the advertising budget? **(CILO-2; 6 marks)**
3. A discussion of the ranges for the objective function coefficients. What do the ranges indicate about how sensitive the recommended solution is to HJ's exposure rating coefficients? **(CILO-2; 6 marks)**
4. After reviewing HJ's recommendation, the Flamingo's management team asked how the recommendation would change if the objective of the advertising campaign was to maximize the number of potential new customers reached. Develop the media schedule under this objective. **(CILO-3; 6 marks)**
5. Compare the recommendations from parts 1 and 4. What is your recommendation for the Flamingo Grill's advertising campaign? **(CILO-3; 6 marks)**