Information/Instructions:

1. Case Summary – Katy EH Manufacturing Company
   The owners of Katy EH Manufacturing, a small manufacturer of gas grills, have prepared a preliminary budget for the upcoming year and would like to assess the financial impact of several alternative scenarios, including dropping a product; changing the price on a product, with a resulting increase in volume; and shifting advertising focus, with a resulting shift in volume from one product to another. A new budget must be prepared. At year-end, the actual results are better than had been planned, but not necessarily better than what should have been, given actual sales volumes.

2. Hint
   Consider using the topic of contribution analysis as an easy way to analyze profit-planning issues such as adding or dropping a product or service; changing a price; adding or decreasing expected volumes; or preparing a profit budget. In this particular situation, there are three products, each with different proportions of variable and fixed costs. Make sure you can identify variable and fix costs. Pay attention to the relation of profit and contribution margin. In addition, you also need to consider non-financial factors prior to make your decision.

3. Required
   a) Should Katy EH drop Grill A? The owners wanted to know the impact of dropping Grill A from their line of products. Sharp was told to assume that the volumes and selling prices of the other two products would be the same whether or not the Grill A product line was dropped (15 points).
   b) Should Katy EH lower the price of Grill C? The owners wanted to know the impact if they lowered the price of Grill C to $75 and if doing so led to a 20,000-unit increase in sales of Grill C (15 points).
   c) Should Katy EH change its advertising focus? The owners wanted to know the impact of a 10,000-unit increase in Grill C volume and a related 10,000-unit decrease in Grill A volume because of a shift in advertising emphasis(15 points).
   d) Should Katy EH lower the price of Grill C and change its advertising focus? The owners wanted to know the impact of lowering the price of Grill C to $75 and shifting the advertising focus more to Grill C, thereby decreasing Grill A volume by 10,000 units and increasing Grill C volume by 30,000 units (15 points).
   e) Prepare a revised 2016 profit budget assuming the owners chose Option 2 – lowering the price of Grill C to $75 and expecting sales volume of that grill to increase to 220,000 units (15 points).
   f) The actual results for 2016 are shown in Exhibits3-4. Was 2016 net income more or less than what should have been expected given these actual volumes and prices? If the results were different, why (25 points).

4) Due Date

Your final report, which should include an executive summary (world file, font Times new roman, size 12, single space, no page limit) and all the necessary supporting spreadsheet(s) will be due by 10:00 p.m. on December 7th, 2015. Please include all your calculation steps and clearly state your solutions/answers to maximize your points.

5) Academic Integrity (PS 03.A.19 and page 24 UHD Student Handbook);

The code states, "Students must be honest in all academic activities and must not tolerate dishonesty." This final exam is an assignment for each student to complete independently. Any discussions/collaborating/cooperating with others on this case are forbidden and will be considered violating the UHD honor code. Therefore, any such behavior will be reported to the UHD Academic Integrity Committee and could result in dismissal of the student(s) from the UHD program(s).

Katy EH Manufacturing Company

In mid-December 2015, Peter Johnson and Lily Brown were almost through with the 2016 operating budget for their company, Katy EH Manufacturing Company (EH). EH produced gas grills in three primary models (Grills A, B, and C). The industry was dominated by Lukey, Coleman, Bonnie, Sunshine, and Highland, which together made dozens of types of grills, smokers, and cooking kettles. EH was a small player in the industry, but business had been good, and it was expecting another profitable year. A draft of the company's operating budget is shown in Exhibit 1. Standard costs for the three products are explained in Exhibit 2. Selling, general, and administrative (SG&A), other costs, interest income, and interest expense were likely to remain the same no matter which product-line combinations the company produced.

Before calling it a day, the two owners asked their assistant, Jane Sharp, to determine the impact of several options on income before tax. They agreed to meet the following day, the Sharp hurried off to look at what these latest ideas would mean. She had six questions to address (see page 1) and was asked to consider each option independent of all other options.

Sharp and the owners met the following morning to review her work. Having finished her duties, she left for an early weekend getaway. She didn't give the budget another thought. Early in January 2017, Sharp prepared a rough draft of the actual 2016 volume, selling price, and financial results (Exhibit 3 & 4). (This case is adopted and modified from Cases in Managerial and Cost Accounting, Cambridge Business Publishers).

Exhibit 1
Katy EH Manufacturing Company
Operating Budget 2016: Draft 12/18/2015

Sales	$41,200,000
Less: costs of products sold	22,800,000
Gross margin	$18,400,000
SG&A	9,350,000
Other costs	2,100,000
Operating income	$6,950,000
Less: Interest expense	420,000
Plus: Interest income	150,000
Income before tax	$6,680,000
Income taxes	2,338,000
Net income	$4,342,000

Exhibit 2
Katy EH Manufacturing Company
Operating Budget 2016: Draft 12/18/2015

	Grill A	Grill B	Grill C	Notes
Planned units	80,000	120,000	200,000	
Per unit				
Sales price	$150	$110	$80	
Direct costs:				
Materials	17	10	7	directly related to volume
Labor	21	16	4	directly related to volume
Subtotal	$38	$26	$11	
Indirect cost:				
Supplies	7	2	1	directly related to volume
Labor	10	8	4	one-half varies with direct labor, the rest is fixed
Supervision	8	3	1	unrelated to volume
Energy	12	6	4	one-half varies with direct labor, the rest is fixed
Depreciation	22	7	5	unrelated to volume
Support*	12	6	3	unrelated to volume
All other	11	2	1	unrelated to volume
Subtotal	$82	$34	$19	
Total cost	$120	$60	$30	
Profitability	$30	$50	$50	

*This category comprises accounting, IT, human resources, legal, and others supporting the production of these products.

Exhibit 3
Actual 2016 Volume & Price

	Grill A	Grill B	Grill C
Price	$150	$110	$75
Volume	115,000	110,000	225,000

Exhibit 4
Katy EH Manufacturing Company
2016 Operating Results: Draft 1/19/2017

Revenue	$46,225,000
Variable costs:	
Materials	4,800,000
Direct labor	5,200,000
Supplies	1,300,000
Indirect labor	1,500,000
Energy	1,600,000
Total variable cost	$14,400,000
Fixed costs:	
Indirect labor	1,300,000
Supervision	1,200,000
Energy	1,350,000
Depreciation	3,660,000
Support	2,300,000
All other	1,380,000
Total fixed cost	$11,190,000
Total cost	$25,590,000
Gross margin	$20,635,000
SG&A	9,350,000
Other costs	2,100,000
Operating income	$9,185,000
Less: interest expense	420,000
Plus: interest income	150,000
Income before tax	$8,915,000
Income taxes	3,120,250
Net income	$5,794,750