

**Assurance of Learning**  
**Learning Goals and Objectives Assessment Summary Report**  
**July 30th, 2016**  
**SPRING/SUMMER 2016**

<b>Program/Course:</b> Master of Science in Business Administration/ STRATEGY	
<b>Assessment Leader:</b> Leticia Porter <b>Assessment Leader email:</b> Leticia_Porter@uml.edu <b>Assessment Leader Campus Phone #:</b> 978.934.2853	
<b>Learning Goal(s) Assessed:</b> Learning Goal: Analytical Skills	
<b>Date of previous assessment(s) of these learning goals:</b> Spring 2015	
<b>Date of this Assessment:</b> Spring 2016	
<b>Assessment Method:</b> Multiple choice instrument developed by the Graduate Programs Committee (GPC)	
<b>Total Population Size from which Sample Taken:</b> N = 62 Sections = 5 (3 online and 2 on campus) Instructors: <ul style="list-style-type: none"> <li>• Altman</li> <li>• Mehta</li> </ul>	<b>Sample Size:</b>  We had an n = 62 of 82 matriculated in the Strategy Formation & Implementation courses. This represents a response rate of 75% which is below the 78.5% we had in the spring of 2014.
<b>Names and Position of Assessors:</b> N/A	
<b>Measurement System Analysis:</b> The instrument used was developed by the GPC and based upon the 'Major Field Test' model used by the ETS. Students were instructed to not guess on any question.	
<b>Internal Performance Benchmark:</b> The GPC has determined a standard of acceptance (SAP) of 75%	
<b>Summary of Results:</b> The PDF files for all areas assessed are attached. The PDFs contain each question asked and the performance on each question. A brief summary is provided here:  <u><b>Analytical Skills: (10 questions)</b></u> Of the students who took the assignment, all answered every question, <b>60%</b> answered correctly. This is a decrease from 2014 when <b>67%</b> answered correctly. Notes: <ul style="list-style-type: none"> <li>• <b>Below the SAP of 75% set by the UPC</b></li> </ul>	
<b>Date of Review of Results by Program or Major:</b> The GPC of the Manning School of Business will review the results in September of 2016. Findings to be added.	
<b>Scheduled next assessment of this/these Learning Objective(s):</b> Spring 2017 see schedule below	
<b>Date of review by Responsible Associate Dean(s):</b> August 1st, 2016	
<b>Brief Self-Assessment of Process Used</b> <b>Strengths:</b> <b>Opportunities for Improvement:</b>	
<u><b>AOL &amp; GPC RECOMMENDATIONS:</b></u> Findings will be forthcoming	

## Assessment Questions

### Question 1

A company is considering designing a new automobile. Their options are a design based on current gasoline engine technology or a government proposed "Green" technology. You are a government official whose job is to encourage automakers to adopt the "Green" technology. You cannot provide funding for development costs, but you can provide a subsidy for every car sold. The development costs and the wholesale price, in thousands of dollars, of the cars are shown in the table following:

Gasoline technology (numbers in \$ thousands)	25	40
"Green" Technology (numbers in \$ thousands)	15	35
Fixed Cost	100,000	200,000

How large a subsidy per vehicle sold will be required, assuming there will be enough demand to motivate the switch?

Answer Options	Response Percent	Response Count
Greater than \$5000	75.8%	47
Less than \$5000	4.8%	3
Cannot be determined	12.9%	8
Equal to \$5000	6.5%	4
None of the above	0.0%	0
<i>answered question</i>		<b>62</b>
<i>skipped question</i>		<b>0</b>
how many answered correctly		47
% who answered correctly		76%

### Question 2

A furniture maker would like to determine the most profitable mix of items to produce. There are well-known budgetary constraints. Each piece of furniture is made of a predetermined amount of material with known costs, and demand is known. Which of the following analytical techniques is the MOST appropriate one to solve this problem?

Answer Options	Response Percent	Response Count
Optimization	66.1%	41
Multiple regression	8.1%	5
Data mining	1.6%	1
Forecasting	22.6%	14
None of the above	1.6%	1
<i>answered question</i>		<b>62</b>
<i>skipped question</i>		<b>0</b>

how many answered correctly	41
% who answered correctly	66%

### Question 3

Summit Products, Inc. is interested in producing and selling an improved widget. Market research indicates that customers would be willing to pay \$90 for such a widget and that 50,000 units could be sold each year at this price. The current cost to produce the widget is estimated to be \$65.

Answer Options	Response Percent	Response Count
Refer to the information above. If Summit Products requires a 25% return on sales to undertake production, what is the target cost for the new widget?	0.0%	0
\$65.00	9.7%	6
\$67.50	64.5%	40
\$80.00	3.2%	2
Some other amount	22.6%	14
<i>answered question</i>		62
<i>skipped question</i>		0
how many answered correctly		40
% who answered correctly		65%

### Question 4

When analyzing responses of a survey of why people like a certain restaurant, factor analysis could reduce the dimension in which of the following ways?

Answer Options	Response Percent	Response Count
Collapse several survey questions regarding food taste, health value, ingredients and consistency into one general unobserved "food quality" variable.	51.6%	32
Condense similar survey respondent answers into clusters of like-minded customers for market segment analysis.	16.1%	10
Reduce the variability of individual subject ratings by centering each respondent's ratings around his or her average rating.	17.7%	11
Decrease variability by analyzing inter-rater reliability on the question items before	12.9%	8

offering the survey to a wide number of respondents.		
None of the above	1.6%	1
<b>answered question</b>		<b>62</b>
<b>skipped question</b>		<b>0</b>
how many answered correctly		32
% who answered correctly		52%

#### Question 5

A total of 30,000 units were sold last year. The contribution margin per unit was \$2, and fixed expenses totaled \$20,000 for the year. This year fixed expenses are expected to increase to \$26,000, but the contribution margin per unit will remain unchanged at \$2. How many units must be sold this year to earn the same profit as was earned last year?

Answer Options	Response Percent	Response Count
23,000 units	1.6%	1
33,000 units	69.4%	43
30,000 units	9.7%	6
13,000 units	6.5%	4
None of the above	12.9%	8
<b>answered question</b>		<b>62</b>
<b>skipped question</b>		<b>0</b>
how many answered correctly		43
% who answered correctly		69%

#### Question 6

How much principal would you have repaid after 2 years for a \$35,000 loan to be repaid in equal installments at the end of each of the next 5 years. The interest rate is 8%.

Answer Options	Response Percent	Response Count
\$5,965.98	22.6%	14
\$4,094.94	6.5%	4
\$12,409.23	41.9%	26
\$25,000.00	1.6%	1
\$35,000.00	3.2%	2
None of the above	24.2%	15
<b>answered question</b>		<b>62</b>
<b>skipped question</b>		<b>0</b>
how many answered correctly		26
% who answered correctly		42%

#### Question 7

King Motors has a target capital structure of 30% debt

and 70% equity. The yield to maturity on the company's outstanding bonds is 6.5%, and the company's tax rate is 40%. King's CFO has calculated the company's WACC as 11.50%. What is the company's cost of equity capital?

Answer Options	Response Percent	Response Count
6.5%	8.1%	5
13.00%	9.7%	6
9.0%	19.4%	12
14.76%	54.8%	34
11.50%	8.1%	5
<i>answered question</i>		<b>62</b>
<i>skipped question</i>		<b>0</b>
how many answered correctly		34
% who answered correctly		55%

#### Question 8

Rosy Technologies (RT) has just developed a solar panel capable of generating 200% more electricity than any solar panel currently on the market. As a result, RT is expected to experience an 18% annual growth rate for the next 5 years. By the end of 5 years, other firms will have developed comparable technology, and RT's growth rate will slow to 7% per year indefinitely. Stockholders require a return of 18% on RT's stock. The most recent annual dividend (D0), which was paid yesterday, was \$1.50 per share. Calculate the estimated intrinsic value of the stock today, P0.

Answer Options	Response Percent	Response Count
\$36.81	14.5%	9
\$31.96	21.0%	13
\$22.09	32.3%	20
\$12.66	6.5%	4
\$39.44	12.9%	8
None of the above	12.9%	8
<i>answered question</i>		<b>62</b>
<i>skipped question</i>		<b>0</b>
how many answered correctly		20
% who answered correctly		32%

#### Question 9

A production process is known to produce a particular item in such a way that 5 percent of these are defective. If two items are randomly selected as they come off the production line, what is the probability that the second item will be defective?

Answer Options	Response Percent	Response Count
0.05	66.1%	41
0.005	9.7%	6
0.18	11.3%	7
0.20	4.8%	3
None of the above	8.1%	5
<i>answered question</i>		<b>62</b>
<i>skipped question</i>		<b>0</b>
how many answered correctly		41
% who answered correctly		66%

### Question 10

The time required to travel downtown at 10 a.m. on Monday morning is known to be normally distributed with a mean of 40 minutes and a standard deviation of 5 minutes. What is the probability that it will take less than 40 minutes?

Answer Options	Response Percent	Response Count
0.50	75.8%	47
0.20	11.3%	7
0.80	9.7%	6
1.00	1.6%	1
None of the above	1.6%	1
<i>answered question</i>		<b>62</b>
<i>skipped question</i>		<b>0</b>
how many answered correctly		47
% who answered correctly		76%

Totals:

How many answered questions	620
How many skipped	0
How many answered correctly	371

**Total percentage answered correctly 60%**