K. J. SOMAIYA INSTITUTE OF MANAGEMENT STUDIES AND RESEARCH

Program:PGDM -FS First Tri (Batch 2018-2020)

Subject: Spreadsheet for Data Analysis
(Supplimentary End Examination)

Maximum Marks: 100   **Duration: 3 hours**   **Date : 22/09/2018**

Question 1 (10 Marks)

You are in charge of a young and growing business. You have identified the various factors (sources of revenue and expenses) that influence the business as shown in the table below. Use the figures provided and the layout to create a financial projection model for the business for the next six years. The parameters are given below.

INCOME AND EXPENSES PROJECTIONS							
	1999	2000	2001	2002	2003	2004	
Sales	10,000						
% Growth over the previous year		20%	30%	20%	10%	10%	
Materials							
Wages							
Other benefits							
Others							
Total Cost of Goods Sold							
Salary: Office							
Salary: Sales							
Other Benefits							
Advertising & Promotions							
Depreciation							
Miscellaneous							
Total General & Admin. Expenses							
Total Operating Costs							
Interest on Loans							
Pre-tax Income							

Tax						
Profit						

SHEET 2:

Parameters		Description
Sales	10,000	Starts at 10,000 and grows by 20% percentage
Materials	17%	17% of Sales
Wages	14%	14% of Sales
Other benefits	2.1%	2.1% of Sales
Others	8%	Starts at 100, then grows by 8% yearly
Salary: Office	10%	Starts at 1,000, then grows by 10% annually
Salary: Sales	8%	8% of Sales
Other Benefits	17%	17% of Total Salary
Advertising & Promotions	2.5%	2.5% of Sales
Depreciation	20	Fixed at 20 every year
Miscellaneous	10	Starts at 10 and grows by a fixed amount of 10 annually
Interest on Loans	10	A fixed amount of 10 each year
Tax	52%	52% of Pre-tax Income

Use the formula given and find out the profit for given scenario. also find out the profit if sales increases by 15%, 25%,30%,35%.

Question 2 (10 Marks)

Imagine that you manage a factory that produces four different types of wood paneling. Each type of paneling is made by gluing and pressing together a different mixture of pine and oak chips. The following table summarizes the required amount of gluing, pressing, and mixture of wood chips required to produce a pallet of 50 units of each type of paneling:

	Resources Required per Pallet of Paneling Type			
	Tahoe	Pacific	Savannah	Aspen
Glue (quarts)	50	50	100	50
Pressing (hours)	5	15	10	5
Pine chips (pounds)	500	400	300	200
Oak chips (pounds)	500	750	250	500

In the next production cycle, you have 5,800 quarts of glue; 730 hours of pressing capacity; 29,200 pounds of pine chips; and 60,500 pounds of oak chips available. Further assume that each pallet of Tahoe, Pacific, Savannah, and Aspen panels can be sold for profits of $450, $1,150, $800, and $400, respectively. Find out optimum product mix.

Question 3 (10 Marks)

Customer Type 10				
	Shipping Method - Standard			
Region	Rail	Truck	Plane	Ship
NW	$ 0.125	$ 0.135	$ 1.525	$ 0.225
West	$ 0.205	$ 0.145	$ 2.025	$ 0.245
SW	$ 0.265	$ 0.165	$ 2.125	$ 0.225
MidWest	$ 0.305	$ 0.185	$ 2.275	$ 0.225
East	$ 0.475	$ 0.425	$ 3.525	$ 0.375

Region
West
Shipping Method
Truck
Customer Type
Customer Type 10
Shipping per Unit

Create the drop down list for region and shipping method and based on choice made the shipping per unit cost should get calculated.

If we need to ship 5400 products to west find out cheapest mode of transport

Calculate total shipping cost for different shipping methods for 5400 product to be shipped to SW region.

Question 4 (10 Marks)

Worldwide Sporting Goods order data is available in **Order data.xlsx.** Do the following
- Using appropriate function display the price of each part in column "C" referring table available in lookup table worksheet
- Calculate the amount of cost of parts in column E
- Using table available in lookup table worksheet fill out column "F" with value of

shipping charges.
- As per company name different discount scales are decided. Pick up the discount scale value in column G referring table available in lookup table worksheet
- Calculate discount on cost of parts in column H using following rates:
   - If discount scale is 3 then rate is 11% of cost of parts
   - If discount scale is 2 then rate is 8% of cost of parts
   - If discount scale is 1 then rate is 5% of cost of parts
- Calculate total cost. Apply background color Green, if total cost value is greater than 10000; Apply background color Yellow, if total cost value is between 5000 and 10000; Apply background color Red, if total cost value is less than 5000.
- Display suitable chart to show % of contribution of each company.
- Create a combination chart showing quantity sold and total cost of each product. (Bar chart for quantity and line chart for total cost)

Question 5 (10 Marks)
Use file **sales.xlsx** file and answer

1) Using pivot table find out yearly and within yearly quarterly revenue
2) use conditional formatting to highlight the qusrter with highest revenue
3) find out yearwise and region wise revenue
4) create the pivot chart for revenue salesperson wise
5) find out the sales person who gave us highest revenue
6) find out which product is getting sold highest
7) find out the product wise revenue and which product gave highest revenue

Question 6 (5 Marks Each)

A) Using NPV function, compute the net present value of the investment for 8% for the costs of capital. What will be the NPV if rate of interest changes to 10%, 12% and 15% (Use Data Table) ?

Period	0	1	2	3	4
Outflow	100000				
Inflow		25000	35000	36000	40000

B) Ramesh is planning to mortgage the house, he can get loan worth 200000 at the rate of interest 4% annually for 15 years. Find out what is the monthly payment he will have to pay. If he is ready to pay 1500 as a monthly payment want is the amount he can get as loan.

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