Finance and Budget – Final Exam – BFM2

Choose Two parts from the Four given and answer to the questions in the Excel file joined

Part I - Capital Investment Decision (50%)

Edge Company's production vice president believes keeping up-to-date with technological changes is what makes the company successful and feels that a machine introduced recently would fill an important need. The machine has an estimated useful life of four years, a purchase price of $250,000, and a residual value of $25,000. The company controller has estimated average annual net income of $11,250 and the following cash flows for the new machine:

Cash Flow Estimates

Year	Cash Inflows	Cash Outflows	Net Cash Inflows
1	$325,000	$250,000	$75,000
2	320,000	250,000	70,000
3	315,000	250,000	65,000
4	310,000	250,000	60,000

The company uses a 12 percent minimum rate of return and a three-year payback period for capital investment evaluation purposes.

Required:

1. Analyze the data about the machine. Use the following evaluation approaches in your analysis:

   a) the net present value method (Round to the nearest dollar.)
   b) the accounting rate-of-return method (Round to one decimal place.)
   c) the payback period method (Round to one decimal place.)

Part II – Evaluating Cost Center Performance (50%)

Metal Products, LLC, manufactures metal beverage containers. The division that manufactures soft-drink beverage cans for the North American market has two plants that operate 24 hours a day, 365 days a year. The plants are evaluated as cost centers. Small tools and supplies are considered variable overhead. Depreciation and rent are considered fixed overhead. For the month, the master budget for a plant and the actual operating results of the two North American plants, East Coast and West Coast, follow.

	Master Budget	East Coast Actual	West Coast Actual
Center costs:			
Rolled aluminum ($0.01)	$4,000,000	$3,492,000	$5,040,000
Lids ($0.005)	2,000,000	1,980,000	2,016,000
Direct labor ($0.0025)	1,000,000	864,000	1,260,000
Small tools and supplies ($0.0013)	520,000	432,000	588,000
Depreciation and rent	480,000	480,000	480,000
Total cost	$8,000,000	$7,248,000	$9,384,000
Performance measures:			
Cans processed per hour	45,662	41,096	47,945
Average daily pounds of scrap metal	5	6	7
Cans processed (in millions)	400	360	420

Required:

1. Prepare a performance report for the East Coast plant. Include a flexible budget and variance analysis.
2. Prepare a performance report for the West Coast plant. Include a flexible budget and variance analysis.
3. Compare the two plants, and comment on their performance.

Part III - Evaluating Profit and Investment Center Performance (50%)

The managing partner of the law firm Sewell, Bagan, and Clark, LLP, makes asset acquisition and disposal decisions for the firm. As managing partner, she supervises the partners in charge of the firm's three branch offices. Those partners have the authority to make employee compensation decisions. The partners' compensation depends on the profitability of their branch office. Vanessa Smith manages the City Branch, which has the following master budget and actual results for the year ended December 31.

	Master Budget	Actual Results
Billed hours	5,000	4,900
Revenue	$ 250,000	$ 254,800
Controllable variable costs:		
Direct labor	(120,000)	(137,200)
Variable overhead	(90,000)	(34,300)
Contribution margin	$ 90,000	$ 83,300
Controllable fixed costs:		
Rent	(30,000)	(30,000)
Other administrative expenses	(45,000)	(42,000)
Branch operating income	$ 15,000	$ 11,300

Required:

1. Assume that the City Branch is a profit center. Prepare a performance report that includes a flexible budget. Determine the variances between actual results, the flexible budget, and the master budget.
2. Assume that the branch managers are assigned responsibility for capital expenditures and that the branches are thus investment centers. City Branch is expected to generate a desired ROI of at least 30 percent on average invested assets of $40,000.
   Compute the branch's return on investment and residual income. (Round per centages to two decimal places.)

Part IV- Computing and Using Standard Costs (50%)

Modular houses are Homes, Inc.'s specialty. The company's best-selling model is a three bedroom, 1,400-square-foot house with an impressive front entrance.

Last year, the standard costs for the six basic direct materials used in manufacturing the entrance were as follows:

- wood framing materials, $2,140;
- deluxe front door, $480;
- door hardware, $260;
- exterior siding, $710;
- electrical materials, $580; and
- interior finishing materials, $1,520.

Three types of direct labor are used to build the entrance:

- carpenter, 30 hours at $36 per hour;
- door specialist, 4 hours at $24 per hour; and
- electrician, 8 hours at $50 per hour.

Last year, the company used an overhead rate of 40 percent of total direct materials cost. This year, the cost of wood framing materials is expected to increase by 20 percent, and a deluxe front door will cost $496. The cost of the door hardware will increase by 10 percent, and the cost of electrical materials will increase by 20 percent. Exterior siding cost should decrease by $15 per unit. The cost of interior finishing materials is expected to remain the same. The carpenter's wages will increase by $1 per hour, and the door specialist's wages should remain the same. The electrician's wages will increase by $0.50 per hour. Finally, the overhead rate will decrease to 30 percent of total direct materials cost.

Required:

1. Compute the total standard cost of direct materials per entrance for last year.
2. Using your answer to requirement 1, compute the total standard unit cost per entrance for last year.
3. Compute the total standard unit cost per entrance for this year. (Round to the nearest dollar.)