PGDM-IB, 2016-17

Managerial Accounting

IB 202

Trimester – II, End-Term Examination: December 2016

Time Allowed: 2 Hrs 30 mins **Max Marks: 50**

Sec A

(Answer any three questions out of five. Each question carries five marks)

1. 'There is no such thing as fixed cost. All costs can be 'Unfixed given sufficient time'. Do you agree? What is the implication of your answer for CVP analysis?

2. 'Increasing the number of indirect-cost pools is guaranteed to sizably increase the accuracy of product or service costs'. Do you agree? Why?

3. Explain the meanings and features of relevant cost. Give suitable example to support your explanation.

4. 'Cost written off as depreciation on equipment already purchased is always irrelevant' – Do you agree? Why?

5. 'All the independent variables in a cost function estimated with regression analysis are cost drivers' – Do you agree? Explain.

Sec B

(Answer any two questions out of three. Each question carries ten marks)

6. Brilliant Travel Agency specializes in flights between Toronto and Jamaica. It books passengers on Ontario Air. Brilliant's fixed costs are $36,000 per month. Ontario Air charges passengers $1,300 per round-trip ticket.

Calculate the number of tickets Brilliant must sell each month to (a) break even and (b) make a target operating income of $12,000 per month in each of the following independent cases.

Required:

1. Brilliant's variable costs are $34 per ticket. Ontario Air pays Brilliant 10% commission on ticket price.
2. Brilliant's variable costs are $30 per ticket. Ontario Air pays Brilliant 10% commission on ticket price.

3. Brilliant's variable costs are $30 per ticket. Ontario Air pays $46 fixed commission per ticket to Brilliant. Comment on the results.
4. Brilliant's variable costs are $30 per ticket. It receives $46 commission per ticket from Ontario Air. It charges its customers a delivery fee of $8 per ticket. Comment on the results.

(10 marks)

7. Thurgood Devices uses activity-based costing to allocate overhead costs to customer orders for pricing purposes. Many customer orders are won through competitive bidding. Direct material and direct manufacturing labor costs are traced directly to each order. Thurgood's direct manufacturing labor rate is $20 per hour. The company reports the following yearly overhead costs:

Wages and salaries	$480,000
Depreciation	60,000
Rent	120,000
Other overhead	240,000
Total overhead costs	$900,000

Thurgood has established four activity cost pools:

Activity Cost Pool	Activity Measure	Total Activity for the Year
Direct manufacturing labor support	Number of direct manufacturing labor-hours	30,000 direct manufacturing labor-hours
Order processing	Number of customer orders	500 orders
Design support	Number of custom designs	100 custom designs
Other	Facility-sustaining costs allocated to orders based on direct manufacturing labor-hours	30,000 direct manufacturing labor-hours

Only about 20% of Thurgood's yearly orders require custom designs.

Paul Moeller, Thurgood's controller, has prepared the following estimates for distribution of the over- head costs across the four activity cost pools:

	Direct Manufacturing Labor Support	Order Processing	Design Support	Other	Total
Wages and salaries	40%	25%	30%	5%	100%
Depreciation	25%	10%	15%	50%	100%
Rent	30%	25%	10%	35%	100%
Other overhead	20%	30%	35%	15%	100%

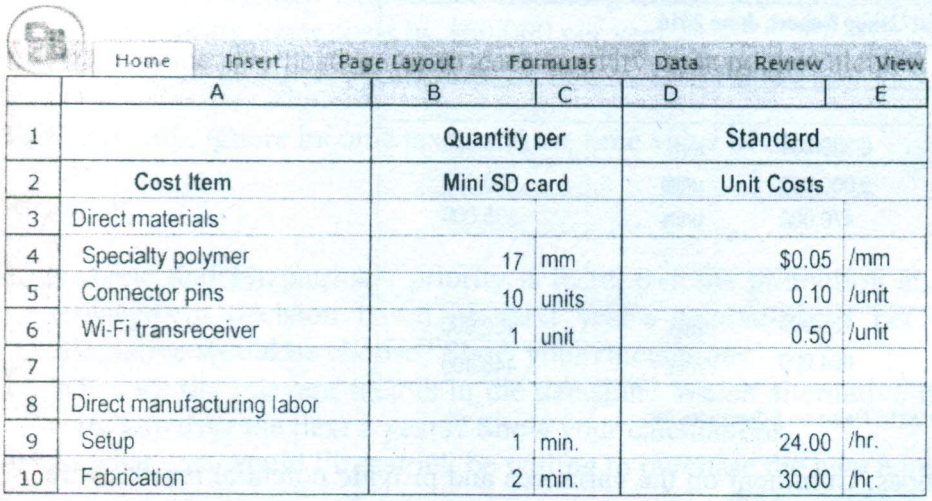
Order 448200 required $4,550 of direct materials, 80 direct manufacturing labor-hours, and one custom design.

Required:

1. Allocate the overhead costs to each activity cost pool. Calculate the activity rate for each pool.
2. Determine the cost of Order 448200.

(10 marks)

8. MicroDisk is the market leader in the Secure Digital (SD) card industry and sells memory cards for use in portable devices such as mobile phones, tablets, and digital cameras. Its most popular card is the Mini SD, which it sells to OEMs as well as through outlets such as Target and Walmart for an average selling price of $8. MicroDisk has a standard monthly production level of 420,000 Mini SDs in its Taiwan facility. The standard input quantities and prices for direct-cost inputs are as follows:



	A	B	C	D	E
1		Quantity per		Standard	
2	Cost Item	Mini SD card		Unit Costs	
3	Direct materials				
4	Specialty polymer	17	mm	$0.05	/mm
5	Connector pins	10	units	0.10	/unit
6	Wi-Fi transreceiver	1	unit	0.50	/unit
7					
8	Direct manufacturing labor				
9	Setup	1	min.	24.00	/hr.
10	Fabrication	2	min.	30.00	/hr.

Phoebe King, the CEO, is disappointed with the results for June 2014, especially in comparison to her expectations based on the standard cost data.

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13	Performance Report, June 2014						
14		Actual		Budget		Variance	
15	Output units	462,000		420,000		42,000	F
16	Revenues	$3,626,700		$3,360,000		$266,700	F
17	Direct materials	1,200,000		987,000		213,000	U
18	Direct manufacturing labor	628,400		588,000		40,400	U

King observes that despite the significant increase in the output of Mini SDs in June, the product's contribution to the company's profitability has been lower than expected. She gathers the following information to help analyze the situation:

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21	Input Usage Report, June 2014			
22	Cost Item	Quantity		Actual Cost
23	Direct materials			
24	Specialty polymer	8,300,000	mm	$415,000
25	Connector pins	5,000,000	units	550,000
26	Wi-Fi transreceiver	470,000	units	235,000
27				
28	Direct manufacturing labor			
29	Setup	455,000	min.	182,000
30	Fabrication	864,000	min.	446,400

Calculate the following variances. Comment on the variances and provide potential reasons why they might have arisen, with particular attention to the variances that may be related to one another:

Required:

1. Selling-price variance
2. Direct materials price variance, for each category of materials
3. Direct materials efficiency variance, for each category of materials

4. Direct manufacturing labor price variance, for setup and fabrication
5. Direct manufacturing labor efficiency variance, for setup and fabrication. (10 marks)

Sec C

(Compulsory)

9. Sean Fitzpatrick manages the Peoria plant of Garcia Manufacturing. A representative of Darien Engineering approaches Fitzpatrick about replacing a large piece of manufacturing equipment that Garcia uses in its process with a more efficient model. While the representative made some compelling arguments in favor of replacing the 3-year-old equipment, Fitzpatrick is hesitant. Fitzpatrick is hoping to be promoted next year to manager of the larger Detroit plant, and he knows that the accrual-basis net operating income of the Peoria plant will be evaluated closely as part of the promotion decision. The following information is available concerning the equipment replacement decision:

- The historic cost of the old machine is $600,000. It has a current book value of $240,000, two remaining years of useful life, and a market value of $144,000. Annual depreciation expense is $120,000. It is expected to have a salvage value of $0 at the end of its useful life.
- The new equipment will cost $360,000. It will have a 2-year useful life and a $0 salvage value. Garcia uses straight-line depreciation on all equipment.
- The new equipment will reduce electricity costs by $70,000 per year and will reduce direct manufacturing labor costs by $60,000 per year.

For simplicity, ignore income taxes and the time value of money.

Required:

1. Assume that Fitzpatrick's priority is to receive the promotion and he makes the equipment replacement decision based on next year's accrual-based net operating income. Which alternative would he choose? Show your calculations.
2. What are the relevant factors in the decision? Which alternative is in the best interest of the company over the next 2 years? Show your calculations.
3. At what cost would Fitzpatrick be willing to purchase the new equipment? Explain.

(15 marks)