**MANAGEMENT ADVISORY SERVICES**

**RELEVANT COSTING**

**THEORY**

1. In the development of accounting data for decision-making, relevant costs are

A. Historical costs which are the best available basis for estimating future costs.

B. Future costs which will differ under each alternative course of action.

C. Budgetary costs authorized for the administrative year.

D. Standard costs developed by time and motion experts.

2. The term relevant cost applies to all of the following decision situations except the

A. Acceptanc*e* of special product order.

B. Manufacture or purchase of a component part.

C. Determination of product price.

D. Replacement of equipment.

3. The relevance of a particular cost to a decision is determined by

A. Riskiness of the decision. C. Amount of the cost.

B. Number of decision variables. D. Potential effect on the decision.

4. A fixed cost is relevant if it is

A. a future cost. B. avoidable. C. sunk. D. a product cost.

5. Management accountants are concerned with incremental unit costs. These costs are similar to the following except

a. The economic marginal cost. c. The cost to produce an additional unit.

b. The variable cost d. The manufacturing unit cost.

6. The type of cost vital to decision making but not recorded in the accounting records

a. Sunk costs b. Opportunity costs c. Direct costs d. Out of pocket costs

7. What is the opportunity cost of making a component part in a factory given no alternative use of the capacity?

a. The variable manufacturing cost of the component.

b. The total manufacturing cost of the component.

c. The total variable cost of the component.

d. Zero.

8. In analyzing whether to build another regional service office, the salary of the Chief Executive Officer (CEO) at the corporate headquarters is

a. Relevant because salaries are always relevant.

b. Relevant because this will probably change if the regional service office is build.

c. Irrelevant because it is future cost that will not differ between the alternatives under consideration.

d. Irrelevant since another imputed costs for the same will be considered.

9. Assume a company produces three products: A, B, and C. It can only sell up to 3,000 units of each product. Production capacity is unlimited. The company should produce the product (or products) that has (have) the highest

a. contribution margin per hour of machine time.

b. gross margin per unit.

c. contribution margin per unit.

d. sales price per unit.

10. All of the following are examples of imputed costs except

A. The stated interest paid on a bank loan.

B. The use of the firm's internal cash funds to purchase assets.

C. Assets that are considered obsolete that maintain a net book value.

D. Decelerated depreciation.

11. The distinction between avoidable and unavoidable costs is similar to the distinction between

a. variable costs and fixed costs. c. step-variable costs and fixed costs.

b. variable costs and mixed costs. d. discretionary costs and committed costs.

12. Total unit costs are

a. Relevant for cost-volume-profit analysis.

b. Needed for determining product contribution.

c. Irrelevant in marginal analysis.

d. Independent of the cost system used to generate them.

13 If a cost is irrelevant to a decision, the cost could **not** be

a. a sunk cost. b. a future cost. c. a variable cost. d. an incremental cost.

14 Sunk costs

a. Are substitute for opportunity costs.

b. In and of themselves are not relevant to decision making.

c. Are relevant to decision making.

d. Are fixed costs.

15 The variable cost of a unit of product made yesterday is

a. An incremental cost. c. A differential cost.

b. An opportunity cost. d. A sunk cost.

16 The manner of determining whether favorable results of an alternative are sufficient to justify the cost of taking that alternative

a. Cost behavior analysis c. Cost control analysis

b. Cost benefit analysis d. Cost center analysis

17. When there is one scarce resource, the product that should be produced first is the product with

a. the highest contribution margin per unit of the scarce resource

b. the highest sales price per unit of scarce resource

c. the highest demand

d. the highest contribution margin per unit

18. Fixed costs are ignored in allocating scarce resources because

a. they are sunk.

b. they are unaffected by the allocation of scarce resources.

c. there are no fixed costs associated with scarce resources.

d. fixed costs only apply to long-run decisions.

19. Among the costs relevant to a make-or-buy decision include variable manufacturing costs as well as

a. Unavoidable costs. c. Avoidable fixed costs.

b. Plant depreciation. d. Real estate taxes.

20. In a make or buy decision, the opportunity cost of capacity could

a. be considered to decrease the price of units purchased from suppliers.

b. be considered to decrease the cost of units manufactured by the company.

c. be considered to increase the price of units purchased from suppliers.

d. not be considered since opportunity costs are not part of the accounting records.

21. Which of the following activities within an organization would be **least likely** to be outsourced?

a. accounting b. product design c. transportation d. data processing

22. Which of the following costs are relevant to a make-or-buy decision?

a. original cost of the production equipment

b. annual depreciation of the equipment

c. the amount that would be received if the production equipment were sold

d. the cost of direct materials purchased last month and used to manufacture the component

23. A purchasing agent has two potential firms to buy materials from for production. If both firms charge the same price, the material cost is

a. an irrelevant cost b. a sunk cost c. a committed cost. d. an opportunity cost

24. Which of the following is NOT relevant in a make-or-buy decision about a part the entity uses in some of its products?

a. The reliability of the outside supplier.

b. The alternative uses of owned equipment used to make the part.

c. The outside supplier’s per-unit variable cost to make the part.

d. The number of units of the part needed each period.

25. When only differential manufacturing costs are taken into account for special-order pricing, an essential assumption is that

a. Manufacturing fixed and variable costs are linear.

b. Selling and administrative fixed and variable costs are linear.

c. Acceptance of the order will not affect regular sales.

d. Acceptance of the order will not cause unit selling and administrative variable costs to increase.

26. If a firm is at full capacity, the minimum special order price must cover

a. variable costs associated with the special order

b. variable and fixed manufacturing costs associated with the special order

c. variable and incremental fixed costs associated with the special order

d. variable costs and incremental fixed costs associated with the special order plus foregone contribution margin on regular units not produced

e. both c and d.

27. Idle capacity in the interim (normally temporary) will generate short-term benefit in accepting sales at price that

a. Positively motivate employees.

b. Result in less than normal contribution margin.

c. Increase total fixed costs.

d. Reduce the overall operating income to sales ratio.

28. Pinoy Company temporarily has excess production capacity, the idle plant facilities can be used to manufacture a low-margin item. The low-margin item should be produced if it can be sold for more than its

a. Variable costs plus opportunity cost of idle facilities.

b. Indirect costs plus any opportunity cost of idle facilities.

c. Fixed costs.

d. Variable costs.

29. An opportunity cost commonly associated with a special order is

a. The contribution margin on lost sales.

b. The variable costs of the order.

c. Additional fixed costs related to the increased output.

d. Any of the above.

30. An increase in direct fixed costs could reduce all of the following **except**

a. product line contribution margin. c. product line operating income.

b. product line segment margin. d. corporate net income.

31. Which of the following costs is NOT relevant to a special order decision?

a. the direct labor costs to manufacture the special order units

b. the variable manufacturing overhead incurred to manufacture the special-order units

c. the portion of the cost of leasing the factory that is allocated to the special order

d. All of the above costs are relevant.

32. There is a market for both product X and product Y. Which of the following costs and revenues would be most relevant in deciding whether to sell product X or process it further to make product Y?

A. Total cost of making X and the revenue from sale of X and Y.

B. Total cost of making Y and the revenue from sale of Y.

C. Additional cost of making Y, given the cost of making X, and additional revenue from Y.

D. Additional cost of making X, given the cost of making Y, and additional revenue from Y.

33. A manager is attempting to determine whether a segment of the business should be eliminated. The focus of attention for this decision should be on

a. the net income shown on the segment's income statement.

b. sales minus total expenses of the segment.

c. sales minus total direct expenses of the segment.

d. sales minus total variable expenses and avoidable fixed expenses of the segment.

34. A product should be dropped if

a. It has negative incremental profit.

b. It has a negative contribution margin.

c. Dropping it will increase the total profit of the company.

d. It is not essential to the company’s product line.

35. The consulting firm of Magaling Corporation is considering the replacement of their computer system. Taking into account the income tax effect and considering the carrying value of the old system (CVOS) and the salvage value of the new system (SVNS), which combination below applies to the decision making process?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | A. | B. | C. | D. |
| CVOS | Irrelevant | Irrelevant | Relevant | Relevant |
| SVNS | Irrelevant | Relevant | Irrelevant | Relevant |

36. In equipment-replacement decisions, which one of the following does not affect the decision-making process?

a. Current disposal price of the old equipment.

b. Operating costs of the old equipment.

c. Original fair market value of the old equipment.

d. Cost of the new equipment.

37. The Mark X Corp. contemplates the temporary shutdown of its plant facilities in a provincial area which is economically depressed due to natural disasters. Below are certain manufacturing and selling expenses.

|  |  |
| --- | --- |
| 1. Depreciation | 5. Sales commissions |
| 2. Property tax | 6. Delivery expenses |
| 3. Interest expense | 7. Security of premises |
| 4. Insurance of facilities |  |

Which of the following expenses will continue during the shutdown period?

a. All expenses in the list. c. Items 1, 2 and 3 only.

b. All except 5 and 6. d. Items 1, 2, 3, 4, 6, and 7 only.

**PROBLEM**

1. A proprietor who just inherited a building is considering using it in a new business venture. Projections for the business are: revenue of $100,000, fixed cost of $30,000, and variable cost of $50,000. If the business is not started, the owner will work for a company for a wage of $23,000. Also, there have been two offers to rent the building, one for $1,000 per month and one for $1,200 per month. What are the expected annual net economic profits (losses) to the owner if the new business is started?

A. $20,000 B. $(3,000) C. $(15,000) D. $(17,400)

2. Bolsa Co. estimates that 60,000 special zipper will be used in the manufacture of industrial bags during the next year. Sure Zipper Co. has quoted a price of P6 per zipper. Bolsa would prefer to purchase 5,000 units per month but Sure is unable to guarantee this delivery schedule. In order to ensure the availability of these zippers, Bolsa is considering the purchase of all 60,000 units at the beginning of the year. Assuming that Bolsa can invest cash at 12%, the company’s opportunity cost of purchasing the 60,000 units are the beginning of the year is

a. P21,600 b. P43,200 c. P19,800 d. P39,600

3. Chow Inc. has its own cafeteria with the following annual costs

|  |  |
| --- | --- |
| Food | P 400,000 |
| Labor | 300,000 |
| Overhead |  440,000 |
| Capital | P1,140,000 |

The overhead is 40% fixed. Of the fixed overhead, P100,000 is the salary of the cafeteria supervisor. The remainder of the fixed overhead has been allocated from total company overhead. Assuming the cafeteria supervisor will remain and that Chow will continue to pay said salary, the maximum cost Chow will be willing to pay an outsider firm to service the cafeteria is

a. P1,140,000 b. P1,040,000 c. P700,000 d. P964,000

4. Listed below are a company’s monthly unit costs to manufacture and market a particular product.

|  |  |  |
| --- | --- | --- |
| Unit Costs | Variable Cost | Fixed Costs |
| Direct materials | $2.00 |  |
| Direct labor |  2.40 |  |
| Indirect Manufacturing |  1.60 | $1.00 |
| Marketing |  2.50 |  1.50 |

The company must decide to continue making the product or buy it from an outside supplier. The supplier has offered to make the product at the same level of quality that the company can make it. Fixed marketing costs would be unaffected, but variable marketing costs would be reduced by 30% if the company were to accept the proposal. What is the maximum amount per unit that the company can pay the supplier without decreasing its operating income?

a. $8.50 b. $6.75 c. $7.75 d. $5.25

5. Picnic Items, Inc. manufactures coolers of 10,000 units that contain a freezable ice bag. For an annual volume of 10,000 units, fixed manufacturing costs of P500,000 are incurred. Variable costs per unit amount are direct materials – P80; direct labor – P15, and variable factory overhead – P20

Bags Corp. offered to supply the assembled ice bag for P40 with a minimum order of 5,000 units. If Picnic accepts the offer, it will be able to reduce variable labor and overhead by 50%. The direct materials for the freezable bag will cost Picnic P20 if it will produce it. Considering Bags Corp. offer, Picnic should

a. Buy the freezable ice bag due to P150,000 advantage.

b. Produce the freezable ice bag due to P25,000 advantage.

c. Produce the freezable ice bag due to P50,000 advantage.

d. Buy the freezable bag due to P50,000 advantage.

6. Savage Industries is a multi-product company that currently manufactures 30,000 units of Part QS42 each month for use in production. The facilities now being used to produce Part QS42 have fixed monthly cost of P150,000 and a capacity to produce 84,000 units per month. If Savage were to buy Part QS42 from an outside supplier, the facilities would be idle, but its fixed costs would continue at 40% of their present amount. The variable production costs of Part QS42 are P11 per unit.

If Savage Industries is able to obtain Part QS42 from an outside supplier at a unit purchase price of P12.875, the monthly usage at which it will be indifferent between purchasing and making Part QS42 is

A. 30,000 units. B. 32,000 units. C. 80,000 D. 48,000

7. Great Electronics is operating at 70% capacity. The plant manager is considering making component 501 now being purchased for P110 each, a price that is projected to increase in the near future. The plant has the equipment and labor force required to manufacture the component. The design engineer estimates that each component requires P40 of direct materials and P30 of direct labor. The plant overhead is 200% of direct labor peso cost, and 40% of the overhead is fixed cost. A decision to manufacture component 501 will result in a gain or (loss) for each component of

a. P28 b. P16 c. P(20) d. P4

8. Part BX is a component that Motors and Engines Co. uses in the assembly of motors. The cost to produce one BX is presented below:

|  |  |
| --- | --- |
| Direct materials | P 4,000 |
| Materials handling (20% of direct materials) | 800 |
| Direct labor | 32,000 |
| Overhead (150% of direct labor) |  48,000 |
| Total manufacturing costs | P84,800 |

Materials handling which is not included in manufacturing overhead, represents the direct variable costs of the receiving department that are applied to direct materials and purchased components on the basis of their cost.

The company’s annual overhead budget is one-third variable and two-thirds fixed. Pre-casts Co., offers to supply BX at a unit price of P60,000. Should the company buy or manufacture?

a. Buy, due to advantage of P24,800 per product.

b. Manufacture, due to advantage of P7,200 per unit.

c. Buy, due to advantage of P12,800 per unit.

d. Manufacture, due to advantage of P19,200 per unit.

9. Panghulo Company manufactures part H for use in its production cycle. The cost per unit for 3,000 units of Part N are

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Direct labor | P50 |  | Fixed overhead | P30 |
| Direct materials | P10 |  | Variable overhead | P20 |

Quebadia Company has offered to sell Panghulo 3,000 units of part H for P100 per unit. If Panghulo accepts Quebada’s offer, the released facilities could be used to save P70,000 in relevant costs in its manufacture of Part I. In addition, P15 per unit of fixed overhead applied to Part H would be totally eliminated.

The alternative that is more desirable and the corresponding net cost savings is

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | a. | b. | c. | d. |
| Alternative | Manufacture | Manufacture | Buy | Buy |
| Net cost savings | P10,000 | P20,000 | P55,000 | P85,000 |

10. Tyler Company currently sells 1,000 units of product M for $1 each. Variable costs are $0.40 and avoidable fixed costs are $400. A discount store has offered $0.80 per unit for 400 units of product M. The managers believe that if they accept the special order, they will lose some sales at the regular price. Determine the number of units they could lose before the order become unprofitable.

a. 267 units. b. 500 units. c. 600 units. d. 750 units

11. The Blue Plate Co. is operating at 50% capacity producing 100,000 units of ceramic plates a year. With the economic boom that the country is expected to have in the coming year, the company plans to utilize 75% capacity. Part of the manufacturing process is hand-painting which has a variable cost of material at P4.50 and labor at P5.50 per plate. This painting process has variable overhead at P1.00 which is 40% of total variable factory overhead. Total factory overhead is P500 per 100 plates. No increase in fixed factory overhead is expected even with the substantial increase in production. An offer to sub-contract the incremental hand-painting job was given at P10.50 per plate but the company will have to lease an equipment at P10,000 annual rental. The plates sell for P50.00 per plate a piece at the contribution margin rate of 45%.

Should Blue Plate Company sub-contract? Why?

a. No, because the company will lose P135,000.

b. Yes, because the company will save P65,000.

c. Yes, because the company will earn P15,000 more.

d. No, because there is no benefit for the company.

12. Pixie Co. produces Component 6417 for use in one of its electronic gadgets. Normal annual production for the item is 100,000 units. The cost per unit lot of the part are as follows:

|  |  |
| --- | --- |
| Direct material | P520 |
| Direct labor | 200 |
| Manufacturing overhead |  |
| Variable | 240 |
| Fixed | 320 |
| Total manufacturing costs per 100 units | P1,280 |

Bobbie Inc. has offered to sell Pixie all 100,000 units it will need during the coming year for P1,200 per 100 units. If Pixie accepts the offer from Bobbie, the facilities used to manufacture Component 6417 could be used in the production of Component 8275. This change would save Pixie P180,000 in relevant costs. In addition, a P200,000 cost item included in fixed overhead is specifically related to Part 6417 and would be eliminated. Pixie should

a. Buy Component 6417 because of P300,000 savings.

b. Buy Component 6417 because of P140,000 savings.

c. Continue producing Component 6417 because of P40,000 savings.

d. Continue producing Component 6417 because of P60,000 savings.

13. Chow Foods operates a cafeteria for its employees. The operations of the cafeteria requires fixed costs of P470,000 per month and variable costs of 40% of sales. Cafeteria sales are currently averaging P1,200,000 per month. The company has the opportunity to replace the cafeteria with vending machines. Gross customer spending at the vending machines is estimated to be 40% greater than the current sale because the vending machines are available at all hours. By replacing the cafeteria with vending machines, the company would receive 16% of the gross customer spending and avoid cafeteria costs. A decision to replace the cafeteria with vending machines will result in a monthly increase (decrease) in operating income of

a. P182,000 b. P258,800 c. (P588,000) d. P18,800

14. ABC Company receives a one-time special order for 5,000 units of Kleen. Acceptance of this order will not affect the regular sales of 80,000 units. The cost to manufacture one unit of this particular product is:

|  |  |  |
| --- | --- | --- |
|  | Variable costs (per unit) | Fixed costs (per year) |
| Direct materials | $1.50 |  |
| Direct labor |  2.50 |  |
| Overhead |  0.80 | $100,000 |
| Selling and administrative |  3.00 |  50,000 |

Variable selling costs for each of these 5,000 units will be $1.00. What is the differential cost to ABC Company of accepting this special order?

A. $39,000 B. $34,000 C. $30,250 D. $29,000

15. PQR Company expects to incur the following costs at the planned production level of 10,000 units:

|  |  |
| --- | --- |
| Direct materials | P100,000 |
| Direct labor | 120,000 |
| Variable overhead | 60,000 |
| Fixed overhead | 30,000 |

The selling price is P50 per unit. The company currently operates at full capacity of 10,000 units. Capacity can be increased to 13,000 units by operating overtime. Variable costs increase by P14 per unit for overtime production. Fixed overhead costs remain unchanged when overtime operations occur. PQR Company has received a special order from a wholesaler who has offered to buy 2,000 units at P45 each.

. What is the incremental cost associated with this special order?

a. P84,000 b. P31,000 c. P62,000 d. P42,000

16. Clay Co. has considerable excess manufacturing capacity. A special job order’s cost sheet includes the following applied manufacturing overhead costs: fixed costs - $21,000, and variable costs - $33,000.

The fixed costs include a normal $3,700 allocation for in-house design costs, although no in-house design will be done. Instead, the job will require the use of external designers costing $7,750. What is the total amount to be included in the calculation to determine the minimum acceptable price for the job?

a. $36,700 b. $40,750 c. $54,000 d. $58,050

17. Sandow Co. is currently operating at a loss of $15,000. The sales manager has received a special order for 5,000 units of product, which normally sells for $35 per unit. Costs associated with the product are: direct material, $6; direct labor, $10; variable overhead, $3; applied fixed overhead, $4; and variable selling expenses, $2. The special order would allow the use of a slightly lower grade of direct material, thereby lowering the price per unit by $1.50 and selling expenses would be decreased by $1. If Sandow wants this special order to increase the total net income for the firm to $10,000, what sales price must be quoted for each of the 5,000 units?

a. $23.50 b. $24.50 c. $27.50 d. $34.00

18. Tagaytay Open-Air Flea Market is along the highway leading to Taal Vista Lodge. Arnel has a stall which specializes in hand-crafted fruit baskets that sell for P60 each. Daily fixed costs are P15,000 and variable costs are P30 per basket. An average of 750 baskets are sold each day. Arnel has a capacity of 800 baskets per day. By closing time, yesterday, a bus load of teachers who attended a seminar at the Development Academy of the Philippines stopped by Arnel’s stall. Collectively, they offered Arnel P1,500 for 40 baskets. Arnel should have

a. Rejected the offer since he could have lost P500.

b. Rejected the offer since he could have lost P900.

c. Accepted the offer since he could have P300 contribution margin.

d. Accepted the offer since he could have P700 contribution margin.

19. Kirklin Co. is a manufacturer operating at 95% of capacity. Kirklin has been offered a new order at $7.25 per unit requiring 15% of capacity. No other use of the 5% current idle capacity can be found. However, if the order were accepted, the subcontracting for the required 10% additional capacity would cost $7.50 per unit. The variable cost of production for Kirklin on a per-unit basis follows:

|  |  |
| --- | --- |
| Materials  | $3.50 |
| Labor | 1.50 |
| Variable overhead | 1.50 |
|   | $6.50 |

In applying the contribution margin approach to evaluating whether to accept the new order, assuming subcontracting, what is the average variable cost per unit?

A. $6.83 B. $7.00 C. $7.17 D. $7.25

20. Sta. Elena Company manufactures men’s caps. The projected income statement for the year before any special order is as follows:

|  |  |  |
| --- | --- | --- |
|  | Amount | Per Unit |
| Sales | P 400,000 | P 20 |
| Cost of goods sold |  320,000 |  16 |
| Gross margin | P 80,000 | P 4 |
| Selling expenses |  30,000 |  3 |
| Operating income | P 50,000 | P 1 |

Fixed costs included in above projected income statement are P80,000 in cost of goods sold and P9,000 in selling expenses.

A special order offering to buy 2,000 caps for P17 each was made to Sta. Elena. No additional selling expenses will be incurred if the special order is accepted. Sta. Elena has the capacity to manufacture 2,000 more caps.

As a result of the special order, the operating income would increase by

a. P34,000 b. P24,000 c. P10,000 d. P0

21. High Class Townhouse, Inc. manages five upscale townhouse in Makati, Ortigas, and Greenhills area. Shown below are the summary income statements for each complex:

|  |  |
| --- | --- |
|  | In Thousand Pesos |
|  | One | Two | Three | Four | Five |
| Rent Income | 10,000 | 12,100 | 23,470 | 18,780 | 10,650 |
| Expenses | 8,000 | 13,000 | 26,000 | 24,000 | 13,000 |
| Profit | 2,000 | (900) | (2,530) | (5,220) | (2,350 |

Included in the expenses is P12,000,000 of corporate overhead allocated to the townhouse based on rental income. The complex that the company should consider selling is (are)

a. Three, Four & Five. c. Two, Three, Four & Five.

b. Four & Five. d. Four.

22. Division A of Decision Experts Corporation is being evaluated for elimination. It has contribution to overhead of P400,000. It receives an allocated overhead of P1 million, 10% of which cannot be eliminated. The elimination of Division A would affect pre-tax income by

a. P400,000 decrease. c. P500,000 decrease.

b. P400,000 increase. d. P500,000 increase.

23. Data covering QMB Corporation’s two product lines are as follows:

|  |  |  |
| --- | --- | --- |
|  | Product “W” | Product “Z” |
| Sales | P36,000 | P25,200 |
| Income before income tax | 15,936 | (8,388) |
| Sales price per unit | 30.00 | 14.00 |
| Variable cost per unit |  8.50 | 15.00 |

The total unit sold of “W” was 1,200 and that of “Z” was 1,800 units.

If Product “Z” is discontinued and this results in a 400 units decrease in sales of Product “W”, the total effect on income will be

a. P13,600 decrease. b. P6,800 decrease. c. P8,600 decrease. d. P5,000 decrease.

24. Ysabelle Industries, Inc. has an opportunity to acquire a new equipment to replace one of its existing equipments. The new equipment would cost P900,000 and has a five-year useful life, with a zero terminal disposal price. Variable operating costs would be P1 million per year. The present equipment has a book value of P500,000 and a remaining life of five years. Its disposal price now is P50,000 but would be zero after five years. Variable operating costs would be P1,250,000 per year. Considering the five years in total, but ignoring the time value of money and income taxes. Ysabelle should

a. Replace due to P400,000 advantage.

b. Not replace due to P150,000 disadvantage.

c. Replace due to P350,000 advantage.

d. Not replace due to P100,000 disadvantage.

25. Nakinnat Corporation’s Outlet No. 5 reported the following results of operations for the period just ended:

|  |  |  |
| --- | --- | --- |
| Sales |  | P2,500,000 |
| Less: Variable expenses |  |  1,000,000 |
| Contribution margin |  | P1,500,000 |
| Less: Fixed expenses |  |  |
|  Salaries & wages | P 750,000 |  |
|  Insurance on inventories | 50,000 |  |
|  Depreciation on equipment | 325,000 |  |
|  Advertising |  500,000 | 1,625,000 |
| Net income (loss) |  | (P125,000) |

The management is contemplating on dropping outlet No. 5 due to the unfavorable operational results. If this would happen, one employee will have to be retained with an annual salary of P150,000. The equipment has no resale value. Outlet No. 5 should

a. Not be dropped due to foregone overall income of P350,000.

b. Be dropped due to foregone overall income of P325,000.

c. Not be dropped due to foregone overall income of P25,000.

d. Be dropped due to overall operational loss of P25,000.

Questions 26 through 28 are based on the following information.

The owners of Dynamics, Inc. has engaged you to assist them in arriving at certain decisions. Dynamics maintains its home office in Manila and rents factory plants in Bulacan, Laguna and Naga, all of which produce the same product.

The management of Dynamics provided you with a projection of operations for 1981 as follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | TOTAL | Bulacan | Laguna | Naga |
| Sales | P 2,200,000 | P 1,100,000 | P 700,000 | P 400,000 |
| Variable costs | 725,000 | 332,500 | 212,500 | 180,000 |
| Fixed costs: |  |  |  |  |
| Factory | 550,000 | 280,000 | 140,000 | 130,000 |
| Administrative | 175,000 | 105,000 | 55,000 | 15,000 |
| Allocated home office costs |  250,000 | 112,500 |  87,500 |  50,000 |
| Total costs | 1,700,000 | 830,000 | 495,000 | 375,000 |
| Net profit from operations |  500,000 | 270,000 | 205,000 |  25,000 |

The sales price per unit is P12.50.

Due to the poor results of operations of the plant in Naga, Dynamics has decided to cease operations and offer the plant’s machinery and equipment for sale by the end of 1980. The company expects to sell these assets at a good price to cover all termination costs.

Dynamics, however, wishes to continue serving its customers in Naga and is considering one of the following three alternatives:

1. Expand the operations of Laguna plant by using space presently idle. This move would result in the following changes in that plant operations;

|  |  |
| --- | --- |
|  | Increase over plant’s current operations |
| Sales | 50% |
| Fixed costs – factory | 20% |
|  – administrative | 10% |

Under this proposal, variable costs would be P4.00 per unit sold.

2. Enter into a long-term contract with another company who will serve the area’s customers. This company will pay Dynamics a royalty of P2.00 per unit based upon an estimate of P30,000 units being sold.

3. Close the Naga plant and not expand the operations of the Laguna plant.

The total home office costs of P250,000 will remain the same under each situation.

26. The estimated net profit from total operations of Dynamics, Inc. that would result from expansion of Laguna plant (Alternative 1) is

a. P425,000 b. P485,000 c. P535,000 d. P618,000

27. The estimated net profit from total operations of Dynamics, Inc. that would result from negotiation of long-term contract on a royalty basis (Alternative No. 2) is

a. P425,000 b. P485,000 c. P535,000 d. P560,000

28. The estimated net profit from total operations of Dynamics, Inc. that would result from shutdown of Naga plant with no expansion of other locations (Alternative No. 3) is

a. P330,000 b. P345,000 c. P425,000 d. P475,000

29. JKL Company is considering replacing a machine with a book value of P100,000, a remaining useful life of 4 years, and annual straight-line depreciation of P25,000. The existing machine has a current market value of P80,000. The replacement machine would cost P160,000, have a 4-year useful life, save P50,000 per year in cash operating costs. If the replacement machine would be depreciated using straight-line method and the tax rate is 40%, what would be the increases in annual income taxes if the company replaces the machine?

A. P21,000 B. P14,000 C. P32,000 D. P20,000

Questions 30 and 31 are based on the following information.

The Sampaguita Steam Laundry bought a laundry truck that can be used for 5 years. The cost of the truck is P225,000 with a salvage value of P35,000. Since the truck is not working efficiently, management has thought of selling the truck immediately and buy a delivery wagon which will serve the company’s purposes more properly. The estimated net returns of the truck for 5 years is P150,000. If the truck is sold, management can only recover P175,000. (In all calculations, use the straight line method of depreciation)

30. The net gain (loss) that will arise if the Company decides to sell the truck is:

a. P(50,000) b. P(75,000) c. P75,000 d. P140,000

31. If the firm decides to keep the truck, the net gain (loss) over the 5-year period is

a. P(40,000) b. P(75,000) c. P50,000 d. P140,000

32. Arlene Inc. currently has annual cash revenues of P2,400,000 and annual operating cost of P1,850,000 (all cash items except depreciation of P350,000). The company is considering the purchase of a new machine costing P1,200,000 per year. The new machine would increase (1) revenues to P2,900,000; (2) operating cost to P2,050,000; and (3) depreciation to P500,000 per year. Assuming a 35% income tax rate, Arlene’s annual incremental after-tax cash flows from the machine would be

a. P330,000 b. P345,000 c. P292,500 d. P300,000

33. Julius International produces weekly 15,000 units of Product JI and 30,000 units of JII for which P800,000 common variable costs are incurred. These two products can be sold as is or processed further. Further processing of either product does not delay the production of subsequent batches of the joint products. Below are some information:

|  |  |  |
| --- | --- | --- |
|  | JI | JII |
| Unit selling price without further processing | P24 | P18 |
| Unit selling price with further processing | P30 | P22 |
| Total separate weekly variable costs of further processing | P100,000 | P90,000 |

To maximize Julius’ manufacturing contribution margin, the total separate variable costs of further processing that should be incurred each week are

a. P95,000 b. P90,000 c. P100,000 d. P190,000

34. A manufacturing company's primary goals include product quality and customer satisfaction. The company sells a product, for which the market demand is strong, for $50 per unit. Due to the capacity constraints in the Production Department, only 300,000 units can be produced per year. The current defective rate is 12% (i.e., of the 300,000 units produced, only 264,000 units are sold and 36,000 units are scrapped). There is no revenue recovery when defective units are scrapped. The full manufacturing cost of a unit is $29.50, including

|  |  |
| --- | --- |
| Direct materials | $17.50 |
| Direct labor | 4.00 |
| Fixed manufacturing overhead  | 8.00 |

The company's designers have estimated that the defective rate can be reduced to 2% by using a different direct material. However, this will increase the direct materials cost by $2.50 per unit to $20 per unit. The net benefit of using the new material to manufacture the product will be

A. $(120,000) B. $120,000 C. $750,000 D. $1,425,000

35. The Table Top Model Corp. produces three products. “Tic,” “Tac.”, and “Toc.” The owner desires to reduce production load to only one product line due to prolonged absence of the production manager. Depreciation expense amounts to P600,000 annually. Other fixed operating expenses amount to P660,000 per year. The sales and variable cost data of the three products are (000’s omitted)

|  |  |  |  |
| --- | --- | --- | --- |
|  | Tic | Tac | Toc |
| Sales | P6,600 | P5,300 | P10,800 |
| Variable costs |  3,900 |  1,700 |  8,900 |

Which product must be retained and what is the opportunity cost of selecting such product line?

a. Retain product “Tac”; opportunity cost is P4.6 million.

b. Retain product “Tac”; opportunity cost is P3.14 million.

c. Retain product “Tic”; opportunity cost is P4.04 million.

d. Retain product “Toc”; opportunity cost is P4.84 million.

36. A company produces and sells three products:

|  |  |
| --- | --- |
|  | Products |
|   | C  | J  | P |
| Sales | $200,000 | $150,000 | $125,000 |
| Separable (product) fixed costs | 60,000  | 35,000  | 40,000 |
| Allocated fixed costs  | 35,000  | 40,000  | 25,000 |
| Variable costs  | 95,000  | 75,000  | 50,000 |

The company lost its lease and must move to a smaller facility. As a result, total allocated fixed costs will be reduced by 40%. However, one of its products must be discontinued in order for the company to fit in the new facility. Because the company's objective is to maximize profits, what is its expected net profit after the appropriate product has been discontinued?

A. $10,000 B. $15,000 C. $20,000 D. $25,000

Questions 37 and 38 are based on the following information.

Hermo Company has just completed a hydro-electric plant at a cost of $21,000,000. The plant will provide the company's power needs for the next 20 years. Hermo will use only 60% of the power output annually. At this level of capacity, Hermo's annual operating costs will amount to $1,800,000, of which 80% are fixed.

Quigley Company currently purchases its power from MP Electric at an annual cost of $1,200,000. Hermo could supply this power, thus increasing output of the plant to 90% of capacity. This would reduce the estimated life of the plant to 14 years.

37. If Hermo decides to supply power to Quigley, it wants to be compensated for the decrease in the life of the plant and the appropriate variable costs. Hermo has decided that the charge for the decreased life should be based on the original cost of the plant calculated on a straight-line basis. The minimum annual amount that Hermo would charge Quigley would be

A. $450,000. B. $630,000. C. $990,000. D. $800,000

38. The maximum amount Quigley would be willing to pay Hermo annually for the power is

A. $600,000. B. $1,050,000. C. $1,200,000. D. $1,000,000

**ANSWER KEY**

**Theory Problems**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1. B | 16. B | 31. C | 1. D | 16. B | 31. A |
| 2. C | 17. A | 32. C | 2. C | 17. A | 32. B |
| 3. D | 18. B | 33. D | 3. D | 18. C | 33. B |
| 4. B | 19. C | 34. C | 4. B | 19. C | 34. C |
| 5. D | 20. A | 35. B | 5. B | 20. C | 35. A |
| 6. B | 21. B | 36. C | 6. D | 21. B | 36. D |
| 7. D | 22. C | 37. B | 7. D | 22. D | 37. B |
| 8. C | 23. A |  | 8. D | 23. B | 38. C |
| 9. C | 24. C |  | 9. C | 24. A |  |
| 10. A | 25. C |  | 10. A | 25. A |  |
| 11. D | 26. D |  | 11. B | 26. D |  |
| 12. C | 27. B |  | 12. B | 27. B |  |
| 13. D | 28. A |  | 13. D | 28. C |  |
| 14. B | 29. A |  | 14. D | 29. B |  |
| 15. D | 30. A |  | 15. A | 30. A |  |