**JAIPURIA INSTITUTE OF MANAGEMENT, INDORE**

**PGDM**

**SECOND TRIMESTER (Batch 2020-22)**

**END TERM EXAMINATION, FEBRUARY-2021**

|  |  |  |  |
| --- | --- | --- | --- |
| Course Name | **Management Accounting** | Course Code | **FIN 202** |
| Max. Time | **2 hours** | Max. Marks | **50** |

**Category 1 (10 Marks)**

1. Hanson Sports has three product lines: footballs, basketballs, and bats. Common costs are allocated based on relative sales. A product line income statement for the year ended December 31, 2021 follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Footballs** | **Basketballs** | **Bats** | **Total** |
| Sales | $600,000  | $800,000  | $400,000  | $1,800,000  |
| Cost of goods sold | 260,000  | 400,000  | 230,000  |  890,000  |
| Gross margin | 340,000  | 400,000  | 170,000  |  910,000  |
| Less other variable costs | 85,000  | 120,000  | 80,000  |  285,000  |
| Contribution margin | 255,000  | 280,000  | 90,000  |  625,000  |
| Less direct salaries | 50,000  | 60,000  | 45,000  |  155,000  |
| Less common fixed costs |  85,000  |  100,000  |  55,000  |  240,000  |
| Net income | $120,000  | $120,000  | ($10,000) | $ 230,000  |

Since the profit for bats is relatively low, the company is considering dropping this product line. What is the incremental effect of dropping bats? **(10 Marks)**

1. Wedding Supply is trying to decide whether or not to continue distributing reception supplies. The following information is available for Wedding Supply’s business segments.

 **Reception Supplies Bridal Dresses Floral Decorations**

Sales $160,000 $110,000 $210,000

Variable costs 84,000 50,000 120,000

Contribution margin 76,000 60,000 90,000

Direct fixed costs 50,000 20,000 25,000

Allocated common fixed costs 30,000 25,000 30,000

Net Income ($ 4,000) $ 15,000 $ 35,000

If reception supplies are dropped, floral decorations sales are expected to increase by 20%. What impact will the increase in floral decorations have on overall profitability? **(10 Marks)**

1. Diva Footwear is contemplating if it should continue producing platform shoes. The following information is available for the company’s segments.

 **Platform Shoes Athletic Shoes Boots**

Sales $120,000 $420,000 $360,000

Variable costs 64,000 220,000 140,000

Contribution margin 56,000 200,000 220,000

Direct fixed costs 45,000 70,000 90,000

Allocated fixed costs 20,000 70,000 60,000

Net income ($ 9,000) $ 60,000 $ 70,000

If platform shoes are dropped, what effect will occur to Diva Footwear’s net income? **(10 Marks)**

1. Diva Footwear is contemplating if it should continue producing platform shoes. The following information is available for the company’s segments.

 **Platform Shoes Athletic Shoes Boots**

Sales $120,000 $420,000 $360,000

Variable costs 64,000 220,000 140,000

Contribution margin 56,000 200,000 220,000

Direct fixed costs 45,000 70,000 90,000

Allocated fixed costs 20,000 70,000 60,000

Net income ($ 9,000) $ 60,000 $ 70,000

If platform shoes are dropped, sales of athletic shoes are expected to drop by 10%. What impact will occur to Diva Footwear’s net income? **(10 Marks)**

1. Macho Sports Company sells soccer and baseball merchandise. The company is trying to decide whether or not to continue the baseball merchandise given the decline in the demand and current loss of this product line. The following information is available for the segments:

 **Baseball Soccer**

Sales $120,000 $420,000

Variable costs 72,000 220,000

Contribution margin 48,000 200,000

Direct fixed costs 32,000 70,000

Allocated common fixed costs 20,000 70,000

Net income ($ 4,000) $ 60,000

The company will allocate more space to the soccer product line if the baseball line is dropped. This will allow soccer sales to increase by 25%. What is the incremental effect of the decision to drop the baseball line? **(10 Marks)**

**Category 2: (15 Marks)**

1. Rather Bedding makes two types of pillow—down and foam. It is currently implementing an activity-based costing system. In the past, all overhead had been applied on the basis of machine hours. The company produces 6,000 down pillows and 18,000 foam pillows per year.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Cost Pool | Driver and Level | Estimated Costs | Use of Driver by Down Pillows | Use of Driver by Foam Pillows |
| Equipment setup | 360 setups | $216,000 | 120 setups | 240 setups |
| Materials ordering | 6,000 orders |  $60,000 | 2,400 orders | 3,600 orders |
| Quality control | 2,000 inspections |  $36,000 | 800 inspections | 1,200 inspections |
| Machining | 8,000 machine hours |  $86,800 | 4,200 machine hours | 3,800 machine hours |

1. What is the overhead cost for each foam pillow when all overhead is applied based on machine hours?

(2 Marks)

1. What is the overhead cost for each down pillow using ABC? (1 Mark)
2. Using ABC, what is the cost per setup to be assigned to down pillows? (2 Marks)
3. What is the overhead cost for each down pillow when all overhead is applied based on machine hours? (2 Marks)

e What is the overhead cost for each foam pillow using ABC? (1 Mark)

f. Using ABC, what is the cost per machine hour in the machining pool? (2 Marks)

g. Determine cost per unit of down pillows and foam pillows using ABC. (5 Marks)

1. Fifth Third Bank is a banking services company that offers several different types of checking accounts. The bank has recently adopted an activity-based costing system to assign costs to its checking accounts. The following data relate to the Mind Your Money checking accounts and the ABC cost pools:

Annual number of accounts = 60,000 accounts

**Cost Pool Cost Cost Drivers**

Returned check costs $3,000,000 Number of returned checks

Account reconciliation costs 60,000 Number of account reconciliation requests

New account setup 650,000 Number of new accounts

Archive requests 400,000 Number of archive requests

Web site costs 195,000 Per account type

Total checking account costs $4,305,000

Annual activity information related to cost drivers:

**Cost Pool All Products Mind Your Money Checking**

Returned checks 200,000 returned checks 18,000

Account reconciliation costs 3,000 reconciliation requests 420

New account setups 60,000 new accounts 15,000

Archive requests 100,000 archive requests 60,000

Web site costs 10 types of accounts 1

How much is the rate to be used to apply the each Mind Your Money checking account using ABC?

 **(10 Marks)**

How much is the rate to be used to apply the each Mind Your Money checking account using traditional costing assuming allocation base of reconciliation requests. **(5 Marks)**

1. Vetronix has traditionally used direct labour cost to allocate overhead to its two products—hammers and mallets. To improve cost determination, VeraTrac set up 3 activity pools: setups, purchase ordering, and quality control. VeraTrac provided the following information for the last quarter of 2014 related to the actual production of 2,400 hammers and 1,600 mallets:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Estimated Cost | Expected Activity | Actual Cost | Actual Activity |
| Hammers | Mallets |
| Setups | Rs.78,000 | 240 setups | Rs.81,400 | 145 setups | 90 setups |
| Purchase ordering |  35,100 | 900 orders |  34,800 | 420 orders | 470 orders |
| Quality control |  41,000 | 500 inspections |  42,300 | 220 inspections | 275 inspections |
| Direct labour | 43,800 | 3,650 hours |  46,875 | 2,150 hours | 1,600 hours |
| Direct materials | 19,360 | 4,400 kilograms |  19,800 | 2,100 kilograms | 3,400 kilograms |

Actual labour cost is Rs.12.50 per hour and actual material cost is Rs.3.60 per kilogram.

1. How much is the overhead unit cost of each hammer using activity-based costing? **(8 Marks)**
2. How much is the overhead unit cost of each hammer if the company continues to use one cost pool? (Round your intermediate calculations to two decimal places) **(5 Marks)**

Is the cost of the hammer over or underapplied? Explain some possible consequences of this. **(2 Marks)**

1. Fox Hunting Gear manufactures two products: camouflage jackets and camouflage hats. The company makes 50,000 jackets and 20,000 hats each year. Information for overhead costs and for the two products appears below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Activity | Driver | Estimated Total Overhead Cost | Jackets | Hats |
| Setups | # of setups | $ 200,000 | 500 setups | 1,500 setups |
| Ordering parts | # of parts |  300,000 | 60,000 parts | 40,000 parts |
| Machining | # of machine hours | 600,000 | 12,000 machine hrs. | 6,000 machine hrs. |
| Inspections | # of inspections | 400,000 | 10,000 inspections | 40,000 inspections |
| Shipping | # of shipments |  300,000 | 10,000 shipments | 10,000 shipments |
| Total overhead |  | $1,800,000 |  |

What will be the overhead cost of each jacket if overhead is assigned using ABC? **(10 Marks)**

What will be the overhead cost of each hats if overhead is assigned using traditional costing using allocation base of machine hours? **(5 Marks)**

**Category 3 (10 Marks)**

1. Vanana Tees sells its cool-zone t-shirts for $24 each. Unit product costs are as follows:

Direct materials $4.50

Direct labor 1.80

Manufacturing overhead 3.50

Total $9.80

A special order to purchase 1,200 shirts was recently received. There is enough capacity to fill the order. Filling this order will not disrupt current operations. Vanana expects to incur an additional $1.10 per unit for additional labor costs due to a slight modification the buyer wants made to the shirts. The manufacturing overhead costs consist of 30% allocated fixed costs. In negotiating a price, how much is Vanana Tees’ minimum acceptable selling price per t-shirt? **(10 Marks)**

1. Cinotti Bread Depot bakes and sells each bagel for $1.25. The cost of producing 600,000 bagels in the prior year was:

Revenues $750,000

Direct materials 330,000

Direct labor 66,000

Manufacturing overhead - fixed 132,000

Manufacturing overhead - variable 84,000

At the start of the current year, Cinotti received a special order for 15,000 bagels to be sold for $1.10 per bagel. The company estimates it will incur an additional $700 in total fixed costs in order to lease a special machine needed to bake the bagels in the customer’s logo shape. Also, this order will not affect any of its other operations. Should the company accept the special order and why? **(10 Marks)**

1. Bell Supply House produces recycled paper that it sells by the case. Budgeted amounts for the coming year are as follows:

Revenues (20,000 cases at $12 each) $240,000

Direct material $40,000

Direct labor 70,000

Variable manufacturing overhead 50,000

Fixed manufacturing overhead 30,000 190,000

Net income $ 50,000

 LTS Enterprises has offered to purchase 2,000 cases of the paper from Bell at a price of $12.50 per case. This special order will have additional variable costs of $0.35 per case due to delivery costs. Bell Supply House has the capacity to produce this order and it will not affect any of its other operations. How much is the incremental profit (loss) associated with the special order? **(10 Marks)**

1. Element Boards makes skateboard wheels. Budget information regarding the current period is given below:

Revenue (200,000 wheels at $3.00) $600,000

Direct materials 120,000

Direct labor 220,000

Variable manufacturing overhead 50,000

Fixed manufacturing overhead 70,000

 The USA Skate Team has approached Element with a special order for 6,000 wheels at a price of $2.75 per wheel. Variable costs will be the same as the current production and accepting the special order will not have any impact on the rest of the company’s orders. However, Element is operating at capacity and will incur an additional $5,000 in fixed manufacturing overhead if the order is accepted. What is the incremental income (loss) associated with accepting the special order? **(10 Marks)**

1. A company manufactures part A, B and C required for its main product Y. The cost per unit and the quantities for each of the parts are stated below-

|  |  |  |  |
| --- | --- | --- | --- |
|  | A | B | C |
| Number of Units Produced | 20,000 | 15,000 | 30,000 |
| Cost per unit | (in Rs.) | (in Rs.) | (in Rs.) |
| Material | 2.00 | 2.50 | 1.50 |
| Labour | 4.00 | 4.50 | 3.50 |
| Variable Overhead | 1.00 | 2.00 | 1.00 |
| Fixed Overhead | 8.00 | 9.00 | 7.00 |
|  | 15.00 | 18.00 | 13.00 |

Increasing demand and limited production capacity necessitates that supplies of one of the parts be obtained from outside. Quotations from outsiders are-

A- Rs.13

B- Rs 16

C- Rs.11

Using variable costing method state with reasons your recommendations as to which part should be procured from outside. **(10 Marks)**

**Category 4 (15 Marks)**

1. Company has prepared the following summary from its functional budgets for the year ended 30th September 2020.

|  |  |  |
| --- | --- | --- |
| Particulars | Amount (in Rs.) | Amount (in Rs.) |
| Sales(1,00,000 units) |  | 15,00,000 |
| Opening Inventory( Zero Units) | Nil |  |
| Production Costs (1,15,000 units) |  |  |
| Direct materials | 4,60,000 |  |
| Direct labour | 5,75,000 |  |
| Variable overhead | 1,15,000 |  |
| Fixed overhead | 2,30,000 |  |
|  | 1,380,000 |  |
| Closing inventory (15,000 units) | (1,80,000) |  |
| Cost of Sales |  | 1,200,000 |
| Gross Profit |  | 3,00,000 |
| Other overhead fixed costs |  | (2,00,000) |
| Net Profit |  | 1,00,000 |

The directors of the company have now met to review the above statement. They have decided to revise the budget as follows:

* Due to competition, reduce the selling price by Rs.5 per unit and despite the reduction in selling price the demand for the product will reduce to 90,000 units.
* Increase some of the unit production costs: direct labour by 10% and variable overhead by 5%. No change is expected to any other costs.
* Reduce production to 100,000 units.

Required- Prepare a summary statement (in the same format as that shown above) which clearly shows the effect of all of the changes proposed by the directors of the company.

1. In the fourth quarter of 2019, Bhasin Wheels had the following net income:

Sales Rs.400,000

Less cost of sales 150,000

Gross margin 250,000

Selling and administration costs 110,000

Income before taxes 140,000

Income taxes 42,000

Net income Rs. 98,000

Purchases in the fourth quarter of 2019 amounted to Rs.170,000. Estimated data for 2020 is as follows:

 First Second Third Fourth

 Quarter Quarter Quarter Quarter

Sales Rs.300,000 Rs.350,000 Rs.400,000 Rs.450,000

Cost of sales 170,000 200,000 230,000 150,000

Purchases 200,000 230,000 250,000 280,000

Selling and admin. 110,000 110,000 110,000 110,000

* Taxes are 30% of pretax income and are paid in the month of accrual.
* All sales are on credit and 30% are collected in the quarter of sale and 70% are collected in the next quarter.
* 40% of purchases are paid in the quarter of purchase and 60% in the next quarter.
* Selling and administrative expenses are paid in the quarter incurred.
* There is Rs.11,000 of depreciation included in selling and administrative expense.
* A capital expenditure for Rs.40,000 is planned for the fourth quarter of 2020.

Prepare a cash disbursements budget for the second quarter of 2020.