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| **Course Title: Management Accounting & Control, (Course Code: )**  **End-Term Examination, Term - III (April 2025)** |
| **Time Duration : 2 Hours Total Marks: 40** |

**Management Accounting & Control**

**Solution**

Q1. The cost of serving the local commercial market according to the ABC model can be determined as follows:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Activity Cost Pool | (a) Activity Rate | | (b) Activity | | (a) × (b) ABC Cost |
|  | Animation concept | $6,040 | per proposal | 25 | proposals | $151,000 |
|  | Animation production | $7,725 | per minute of animation | 5 | minutes | 38,625 |
|  | Contract administration | $6,800 | per contract | 10 | contracts | 68,000 |
|  |  |  |  |  |  | $257,625 |

2. The margin earned serving the local commercial market is negative, as shown below:

|  |  |  |  |
| --- | --- | --- | --- |
|  | *Profitability Analysis* |  |  |
|  | Sales |  | $180,000 |
|  | Costs: |  |  |
|  | Animation concept | $151,000 |  |
|  | Animation production | 38,625 |  |
|  | Contract administration | 68,000 | 257,625 |
|  | Margin |  | $(77,625) |

3. It appears that the local commercial market is losing money and the company would be better off dropping this market segment. However, as discussed in the previous problem, not all of the costs included above may be avoidable. If more than $77,625 of the total costs of $257,625 is not avoidable, then the company really isn’t losing money on the local commercial market and the segment should not be dropped

Q.2

Contribution Margin (CM) per Passenger

CM=Selling Price−Variable Cost=$80−$20=$60\text{CM} = \text{Selling Price} - \text{Variable Cost} = \$80 - \$20 = \$60CM=Selling Price−Variable Cost=$80−$20=$60

2. Break‑Even Point (Passengers per Flight)

At break‑even, total contribution covers fixed cost:

Break‑Even Load=Fixed CostCM per Passenger=$2, ⁣400$60=40 passengers\text{Break‑Even Load} = \frac{\text{Fixed Cost}}{\text{CM per Passenger}} = \frac{\$2,\!400}{\$60} = 40\ \text{passengers}Break‑Even Load=CM per PassengerFixed Cost​=$60$2,400​=40 passengers

3. Load to Earn $1,050 After Taxes

1. Compute Required Before‑Tax Profit  
   Let PBTP\_{\text{BT}}PBT​ = before‑tax profit. After 30% tax:

PAT=PBT×(1−0.30)⟹PBT=PAT0.70=$1, ⁣0500.70=$1, ⁣500P\_{\text{AT}} = P\_{\text{BT}}\times(1 - 0.30) \quad\Longrightarrow\quad P\_{\text{BT}} = \frac{P\_{\text{AT}}}{0.70} = \frac{\$1,\!050}{0.70} = \$1,\!500PAT​=PBT​×(1−0.30)⟹PBT​=0.70PAT​​=0.70$1,050​=$1,500

1. Compute Required Load  
   Total contribution must cover fixed cost plus $1,500 profit:

Passengers=Fixed Cost+PBTCM=$2, ⁣400+$1, ⁣500$60=$3, ⁣900$60=65 passengers\text{Passengers} = \frac{\text{Fixed Cost} + P\_{\text{BT}}}{\text{CM}} = \frac{\$2,\!400 + \$1,\!500}{\$60} = \frac{\$3,\!900}{\$60} = 65\ \text{passengers}Passengers=CMFixed Cost+PBT​​=$60$2,400+$1,500​=$60$3,900​=65 passengers

4. Capacity Check (Max 70 Seats)

| Metric | Required Passengers | Capacity = 70 |
| --- | --- | --- |
| Break‑Even Load | 40 | ✅ Feasible |
| Load for $1,050 After‑Tax Profit | 65 | ✅ Feasible |

Both the break‑even point (40) and the target‑profit load (65) lie below the 70‑seat capacity, so the route can be operated profitably under these assumptions.

Q.3

| Division | Gross Profit | Op. Expenses | Depreciation | Operating Income | Assets | ROA (%) |
| --- | --- | --- | --- | --- | --- | --- |
| Layout & Marketing | $400,000 | $200,000 | $0 | $200,000 | $200,000 | 200,000 / 200,000 = 100.0% |
| Office Furniture | $400,000 | $100,000 | $1,000,000 ÷ 10 = $100,000 | $200,000 | $1,200,000 | 200,000 / 1,200,000 = 16.7% |
| Office Supplies | $400,000 | $150,000 | $500,000 ÷ 10 = $50,000 | $200,000 | $700,000 | 200,000 / 700,000 = 28.6% |