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SUGGESTED SOLUTION

INTERMEDIATE M'19 EXAM

SUBJECT- COSTING AND F.M.

Test Code – CIM 8041

Date: 25.08.2018

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ANSWER-1

Working Notes:

1. Manufacturing Expenses		**Rs.**
Sales		24,00,000
Less: Gross Profit Margin at 20%		4,80,000
Total Manufacturing Cost		19,20,000
Less: Materials Consumed	6,00,000	
Wages	4,80,000	10,80,000
Manufacturing Expenses		8,40,000
Less: Cash Manufacturing Expenses (50,000 × 12)		6,00,000
Depreciation		2,40,000
2. Total Cash Costs		**Rs.**
Manufacturing Costs		19,20,000
Less: Depreciation		2,40,000
Cash Manufacturing Costs		16,80,000
Add: Administrative Expenses		1,50,000
Add: Sales Promotion Expenses		75,000
Total Cash Costs		19,05,000

(5 MARKS)

Statement showing the Requirements of Working Capital of the Company

		Rs.
Current Assets:		
Debtors 1/6 the of Total Cash Costs (1/6 × Rs. 19,05,000) (Refer to Working Note 2)		3,17,500
Sales Promotion Expenses (prepaid)		18,750
Stock of Raw Materials (1 month)		50,000
Finished Goods (1/12 of Cash Manufacturing Costs) (Rs. 16,80,000 x 1/12) (Refer to Working Note 2)		1,40,000
Cash-in-Hand		80,000
		6,06,250
Less: Current Liabilities		
Creditors for Goods (2 months)	1,00,000	
Wages (1 month)	40,000	
Manufacturing Expenses (1 month)	50,000	
Administrative Expenses (1 month)	12,500	2,02,500
Net Working Capital		4,03,750
Add: Safety Margin @ 10%		40,375
Working Capital Required		4,44,125

(5 MARKS)

ANSWER-2

(i) Computation of the value of materials purchased

	Amt.(Rs.)
Cost of goods sold	56,000
Add : Closing stock of finished goods	19,000
Less : Opening stock of finished goods	(17,600)
Cost of goods manufactured	57,400
Add : Closing stock of work – in – progress	14,500
Less : Opening stock of work – in – progress	(10,500)
Works cost	61,400
Less : Factory overheads : $\left[\frac{100}{175}\ of\ direct\ labour\ cost\right]$	(10,000)
Prime cost	51,400
Less : Direct labour	(17,500)
Raw material consumed	33,900
Add : Closing stock of raw materials	10,600
Raw materials available	44,500
Less : Opening stock of raw materials	(8,000)
Value of materials purchased	36,500

(5 MARKS)

(ii) Cost statement

	(Rs.)
Raw material consumed [Refer to statement (i) above]	33,900
Add: Direct labour cost	17,500
Prime cost	51,400
Add: Factory overheads	10,000
Works cost	61,400
Add: Opening work-in-progress	10,500
Less: Closing work-in-progress	(14,500)
Cost of goods manufactured	57,400
Add: Opening stock of finished goods	17,600
Less: Closing stock of finished goods	(19,000)
Cost of goods sold	56,000
Add: General and administration expenses	2,500
Add: Selling expenses	3,500
Cost of sales	62,000
Profit (Balance figure Rs. 75,000 – Rs. 62,000)	13,000
Sales	75,000

(5 MARKS)

ANSWER-3

Sohna Food and Beverages Ltd.

Projected Profitability Statement at 80% capacity

Units to be produced (36,000/60 x 80) = 48,000 packets

A.	**Cost of Sales:**			**(Rs.)**
	Raw material	Rs. 4 x 48,000	=	1,92,000
	Wages	Rs. 2 x 48,000	=	96,000
	Overheads(Variable)	Rs. 2 x 48,000	=	96,000
	Overheads (Fixed)	Rs. 1 x 36,000	=	36,000
				4,20,000
B.	**Profit**	Rs. 3.25 x 48,000	=	1,56,000
C.	**Sale value**	Rs. 12 x 48,000	=	5,76,000

Alternatively

If we assume the movement in stock levels, because of increase in capacity, i.e., from 60% to 80%, the profitability statement will be as follows:

Units to be produced (36,000/60 x 80) 48,000 packets **(2 MARKS)**

A. Cost of goods sold:

		Rs.
Raw Material	(4 x 48,000)	1,92,000
Wages	(2 x 48,000)	96,000
Overheads (Variable)	(2 x 48,000)	96,000
Overheads (Fixed)	(1 x 36,000)	36,000
		4,20,000
Less : Increase in stock of Materials + WIP + Finished goods (Refer to working note)		18,000
Adjusted cost of sales		4,02,000
B. Profit		1,62,000
C. Sales	(12 x 47,000)*	5,64,000

* Opening Stock + production - closing stock = 3,000 + 48,000-4,000= 47,000 **(2 MARKS)**

Working Note:

Capacity		60%		80%
Number of units of production		36,000		48,000
	Cost/Unit	**Rs.**		**Rs.**
Raw material stock (I month)	4	12,000		16,000
WIP Stock:				
Material (1 month) .	4	12,000		16,000
Wages (1/2 month)	2	3,000		4,000
Variable overheads (1/2 month)	2	3,000		4,000
Fixed overheads (1/2 month)	1	1,500	(0.75)	1,500
Finished goods (1 month)	9	27,000	(8.75)	35,000
		58,500		76,500
Increase in Stock				18,000

(2 MARKS)

Working Notes:

Cost of Sales-average per month

	Per annum	**Per month**
Raw material	1,92,000	16,000
Wages .	96,000	8,000
Overheads (Variable)	96,000	8,000
Overheads (Fixed)	36,000	3,000
	4,20,000	35,000
Profit	1,56,000	13,000
Sale value	5,76,000	48,000

Projected Statement of Working Capital at 80% capacity

Current Assets			
Raw material (48000/12 x 4)		16,000	
Work in process		25,500	
Materials (48,000 x 4 x 1/12)	16,000		
Wages (48,000 x 2 x 1/24)	4,000		
Variable overheads (48,000 x 2 x 1/24)	4,000		
Fixed overheads (48,000 x 0.75 x 1/24)	1,500		
Finished goods (48,000 x 8.75 x 1/12)		35,000	
		76,500	
Sundry debtors		96,000	

		1,72,500	
Cash balance		19,500	(A) 1,92,000
Less: Current Liabilities:			
Creditors for goods (48,000 x 4 x 3/12)		48,000	
Creditors for expenses (48,000 x 4.75 x 1/12)		19,000	(B) 67,000
Net working capital (A)-(B)			1,25,000

Note:

(i) Since wages and overheads payments accrue evenly, it is assumed that they will be in process for half a month in average,

(ii) Fixed overheads per unit = Rs. 36000/48000=Rs. 0.75. **(4 MARKS)**

ANSWER-4

Statement of Cost and Profit (for the month of June 20X8)

	Amount (Rs.**)**
Opening stock of raw materials	60,000
Add: Purchase of raw materials during June' 20X8	4,80,000
Less: Closing stock of raw materials	(50,000)
(a) Raw materials consumed	**4,90,000**
Add: Direct wages	2,40,000
(b) Prime cost	**7,30,000**
Add: Factory overheads	1,00,000
Works cost	8,30,000
Add: Opening work-in-process	12,000
Less: Closing work-in-process	(15,000)
(c) Factory cost	**8,27,000**
Add: Administration overheads	50,000
Cost of production	8,77,000
Add: Opening stock of finished goods	90,000
Less: Closing stock of finished goods	(1,10,000)
(d) Cost of goods sold	**8,57,000**

Add: Selling & distribution overheads	25,000
Cost of sales	8,82,000
(e) Net Profit	**1,18,000**
Sales	10,00,000

(10 MARKS)

ANSWER-5

Preparation of Financial Statements

Particulars	**%**	**(Rs.)**
Share capital	50%	1,00,000
Other shareholders funds	15%	30,000
5% Debentures	10%	20,000
Trade creditors	25%	50,000
Total	100%	2,00,000

Land and Buildings = Rs. 80,000

Total Liabilities = Total Assets

Rs. 2,00,000 = Total Assets

Fixed Assets = 60% of Total Gross Fixed Assets and Current Assets

= Rs. 2,00,000 X Rs. 60/100

= Rs. 1,20,000

Calculation of Additions to Plant & Machinery

	Rs.
Total Fixed Assets	1,20,000
Less: Land and Building	80,000
Plant and Machinery (after providing depreciation)	40,000
Depreciation on Machinery up to 31-3-2013	15,000
Add: Further Depreciation	5,000

Total	**20,000**

Current Assets = Total Assets – Fixed Assets

= Rs. 2,00,000 – Rs. 1,20,000 = Rs. 80,000

Calculation of Stock

Quick Ratio $= \frac{\text{Current Assets - Stock}}{\text{Current Liabilities}} = 1$

$= \frac{Rs. 80,000 - Stock}{Rs. 50,000} = 1$

Rs. 50,000 = Rs. 80,000 – Stock

Stock = Rs. 80,000 – Rs. 50,000

= Rs. 30,000

Debtors = 4/5th of Quick Assets

= (Rs. 80,000 – 30,000) Rs. 4/5

= Rs. 40,000

Debtors Turnover Ratio

$= \frac{\text{40,000 x 12}}{\text{Credit Sales}} = \text{ 2 months}$

2 Credit Sales = 4,80,000

Credit Sales = 4,80,000/2

= 2,40,000

Gross Profit (15% of Sales)

Rs. 2,40,000 Rs. 15/100 = Rs. 36,000

Return on Networth (profit after tax)

Networth = Rs. 1,00,000 + Rs. 30,000

= Rs. 1,30,000

Net Profit = Rs. 1,30,000 Rs. 10/100 = Rs. 13,000

Debenture Interest = Rs. 20,000 Rs. 5/100 = Rs. 1,000 **(7 MARKS)**

Projected Profit and Loss Account for the year ended 31-3-2014

To Cost of Goods Sold	2,04,000	By Sales	2,40,000
To Gross Profit	36,000		
	2,40,000		**2,40,000**
To Debenture Interest	1,000	By Gross Profit	36,000
To Administration and Other Expenses	22,000		
To Net Profit	13,000		
	36,000		**36,000**

(1.5 MARKS)

Ganesha Limited

Projected Balance Sheet as on 31st March, 2014

Liabilities	**Rs.**	**Assets**		**Rs.**
Share Capital	1,00,000	Fixed Assets		
Profit and Loss A/c	30,000	Land & Buildings		80,000
(17,000+13,000)		Plant & Machinery	60,000	
5% Debentures	20,000	Less: Depreciation	20,000	40,000
Current Liabilities		Current Assets:		
		Stock	30,000	
Trade Creditors	50,000	Debtors	40,000	
		Bank	10,000	80,000
	2,00,000			**2,00,000**

(1.5 MARKS)

ANSWER-6

ANSWER-A

Computation of Degree of Operating Leverage (DOL), Degree of Financial Leverage (DFL) and Degree of Combined Leverage (DCL)

	Firm N	**Firm S**	**Firm D**
Output (Units)	17,500	6,700	31,800
Selling Price/Unit	85	130	37

Sales Revenue (A)	14,87,500	8,71,000	11,76,600
Variable Cost/Unit	38.00	42.50	12.00
Less: Variable Cost (B)	6,65,000	2,84,750	3,81,600
Contribution (A-B)	8,22,500	5,86,250	7,95,000
Less: Fixed Cost	4,00,000	3,50,000	2,50,000
EBIT	4,22,500	2,36,250	5,45,000
Less: Interest on Loan	1,25,000	75,000	-
PBT	2,97,500	1,61,250	5,45,000
DOL = $\frac{C}{EBIT}$	$\frac{8,22,500}{4,22,500}=1.95$	$\frac{5,86,250}{2,36,250}=2.48$	$\frac{7,95,000}{5,45,000}=1.46$
EFL = $\frac{EBIT}{PBT}$	$\frac{4,22,500}{2,95,500}=1.42$	$\frac{2,36,250}{1,61,250}=1.47$	$\frac{5,45,000}{5,45,000}=1.00$
DCL = OL x FL OR	1.95 x 1.42 = 2.77	2.48 x 1.47 = 3.65	1.46 x 1 = 1.46
DCL = $\frac{Contribution}{PBT}$	$\frac{8,22,500}{2,97,500}=2.76$	$\frac{5,86,250}{1,61,250}=3.64$	$\frac{7,95,000}{5,45,000}=1.46$

(5 MARKS)

ANSWER-B

Calculation of Degree of Operating leverage and Degree of Combined leverage

Firm	Degree of Operating Leverage (DOL) $= \frac{\%\text{Change in Operating Income}}{\%\text{ change in Revenue}}$	Degree of Combined Leverage (DCL) $= \frac{\%\text{ change in EPS}}{\%\text{ change in Revenue}}$
P	$\frac{25\%}{27\%}=0.926$	$\frac{30\%}{27\%}=1.1111$

Q	$\frac{32\%}{25\%} = 1.280$	$\frac{24\%}{25\%} = 0.960$
R	$\frac{36\%}{23\%} = 1.565$	$\frac{21\%}{23\%} = 0.913$
S	$\frac{40\%}{21\%} = 1.905$	$\frac{23\%}{21\%} = 1.095$

(5 MARKS)