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**SUGGESTED SOLUTION**  
**INTERMEDIATE M'19 EXAM**

**SUBJECT- COSTING AND F.M.**

**Test Code – CIM 8040**

**Date: 25.08.2018**

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## ANSWER-1

### (a) Statement of Equivalent Production

Input		Output		Equivalent Production			
Details	Units	Details .	Units	Materials		Labour & overheads	
				units	%	units	%
Opening WIP	1,000	Units completed	17,500	17,500	100	17,500	100
Introduced	19,000	Normal Loss (5%)	1,000	-	-	-	-
		Abnormal Loss	500	500	100	400	80
		Closing WIP	1,000	1,000	100	800	80
	<b>20,000</b>		<b>20,000</b>	<b>19,000</b>		<b>18,700</b>	

### (b) Statement of cost for each element

Cost Elements	Cost of Opening WIP Rs.	Cost in process Rs.	Total cost RS.	Equivalent Production units	Cost per Unit (Rs.)
Material			7,80,000		
(-) Value of normal scrap	40,000	7,40,000	20,000		
			7,60,000	19,000	40
Labour	7,500	1,79,500	1,87,000	18,700	10
Overheads	22,500	5,38,500	5,61,000	18,700	30
					80

### (c) Statement of apportionment of cost

Details	Element	Equivalent production (units)	Cost per unit Rs.	Cost Rs.	Total Cost Rs.
Units completed	Material	17,500	40	7,00,000	14,00,000
	Labour	17,500	10	1,75,000	
	Overheads	17,500	30	5,25,000	
Abnormal loss	Material	500	40	20,000	36,000
	Labour	400	10	4,000	
	Overheads	400	30	12,000	
Closing WIP	Materials'	1,000	40	40,000	72,000
	Labour	800	10	8,000	
	Overheads	800	30	24,000	

**(d) Process A Account**

Particulars	Units	Amount (Rs.)	Particulars	Units	Amount (Rs.)
To Balance (O/WIP)	1,000	70,000	By Normal loss @ Rs. 20 p.u.	1,000	20,000
" New units introduced	19,000		" Abnormal loss	500	36,000
Material		7,40,000	" Process B A/c	17,500	14,00,000
Labour Overheads		1,79,500	" Balance c/d (clo-ing WIP)	1,000	72,000
		5,38,500			
	<b>20,000</b>	<b>15,28,000</b>		<b>20,000</b>	<b>15,28,000</b>

**(2\*4 = 8 MARKS)**

Dr.

**Normal Loss Account**

Cr.

Particulars	Units	Amount (Rs.)	Particulars	Units	Amount (Rs.)
To Process A A/c	1,000	20,000	By Cost Ledger Control A/c	1,000	20,000

Dr.

**Abnormal Loss Account**

Cr.

Particulars	Units	Amount (Rs.)	Particulars	Units	Amount (Rs.)
To Process A A/c	500	36,000	By Cost Ledger Control A/c	500	10,000
			" Costing' P & L A/c		26,000
	<b>500</b>	<b>36,000</b>		<b>500</b>	<b>36,000</b>

**(1\*2=2 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 : $\left[\frac{100}{175} \text{ of direct labour cost}\right]$	(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

Process X Account

Particulars	Units	Amount Rs.	Particulars	Units Rs.	Amount
To Units introduced	40,000	3,20,000	By Normal loss	2,000	1,400
" Materials used		1,20,000	(5% @ 70 paise)		
" Direct labour cost		80,000	" Transfer to Process II@		
" Production expenses		40,000	Rs. 14.70 p.m.*	38,000	5,58,600
	<b>40,000</b>	<b>5,60,000</b>		<b>40,000</b>	<b>5,60,000</b>

\* (Rs. 5,60,000 - Rs. 1,400)/38,000 units = Rs. 14.70 per unit.

(3 MARKS)

### Process II Account

Particulars	Units	Amount Rs.	Particulars	Units	Amount Rs.
To Transfer from Process I	38,000	5,58,600	By Normal Loss (7% @ 80 paise)	2,660	2,128
To Materials used		40,000	By Abnormal loss @ Rs.19.7078**	740	14,584
To Direct Labour cost		60,000	By Transfer to Process III@ Rs.19.7078 p.u.	34,600	6,81,888
To Production expenses		40,000			
	<b>38,000</b>	<b>6,98,600</b>		<b>38,000</b>	<b>6,98,600</b>

\*\* (Rs. 6,98,600 - 2,128)/(38,000 - 2,660) = Rs. 19.7078 per unit

(4 MARKS)

### Process III Account

Particulars	Units	Amount Rs.	Particulars	Units	Amount Rs.
To Transfer from Process II	34,600	6,81,888	By Normal Loss (10% @ Re.1)	3,460	3,460
To Materials used		40,000	By Transfer to stock @ Rs.25.8968#	32,000	8,28,700
To Direct labour cost		60,000			
To Production expenses		28,000			
To Abnormal gain @ Rs.25.8968#	800	22,272			
	<b>35,460</b>	<b>8,32,160</b>		<b>35,460</b>	<b>8,32,160</b>

# (Rs. 8,09,888 - 3,460)/(34,600 - 3,460) = Rs. 25.8968 per unit

(3 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)
<b>(a) Raw materials consumed</b>	<b>4,90,000</b>
Add: Direct wages	2,40,000

<b>(b) Prime cost</b>	<b>7,30,000</b>
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)
<b>(c) Factory cost</b>	<b>8,27,000</b>
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)
<b>(d) Cost of goods sold</b>	<b>8,57,000</b>
Add: Selling & distribution overheads	25,000
Cost of sales	8,82,000
<b>(e) Net Profit</b>	<b>1,18,000</b>
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
<b>Total</b>	<b>20,000</b>

Current Assets = Total Assets – Fixed Assets

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

### Calculation of Stock

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

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

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

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

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		
	<b>2,40,000</b>		<b>2,40,000</b>
To Debenture Interest	1,000	By Gross Profit	36,000
To Administration and Other Expenses	22,000		
To Net Profit	13,000		
	<b>36,000</b>		<b>36,000</b>

**(1.5 MARKS)**

**Ganesha Limited**

**Projected Balance Sheet as on 31st March, 2014**

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

**(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)**

	<b>Firm N</b>	<b>Firm S</b>	<b>Firm D</b>
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	1.95 x 1.42	2.48 x 1.47	1.46 x 1
OR	= 2.77	= 3.65	= 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)	Degree of Combined Leverage (DCL)
	$= \frac{\% \text{Change in Operating Income}}{\% \text{ change in Revenue}}$	$= \frac{\% \text{ change in EPS}}{\% \text{ change in Revenue}}$
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)