6. WORKING CAPITAL MANAGEMENT

PROBLEM NO: 1

Statement showing estimation of working cap requirement

Particulars	Calculation	Amount (Rs.)
A) Current Assets		
I) Inventories		
i) Raw materials	$\frac{26000 \times 3.00}{52} \times 3 = 4500$	4500
ii) Work-in-process		
a) Raw Material	$\frac{26000 \times 3.00}{52} \times 3 = 4500$	
b) Labour	$\frac{26000 \times 4}{52} \times 3 \times \frac{1}{2} = 300$	
c) O.H Exp	$\frac{26000 \times 2}{52} \times 3 \times \frac{1}{2} = 1500$	9000
iii) Finished Goods	$\frac{26000 \times 9}{52} \times 2$	9000
iv) Debtors	$\frac{26000 \times 9}{52} \times 8$	36000
Total Currant Assets		58500
B) Current Liabilities		
i) Creditors for R.M.S	$\frac{26000 \times 3}{52} \times 5$	7500
Total Current liabilities		7500
Net working Cap (A-B)		51000

PROBLEM NO: 2

Statement showing estimation of w cop requirement [Cash Cost Basis]

Particulars	Calculation	Amount (Rs.)
A) : Current Assets		
I) Inventories		
i) Raw materials	$\frac{54000 \times 50}{12} \times 1$	225000
ii) Work-in-process		
a) Raw Material	$\frac{54000 \times 50}{12} \times 0.5 = 112500$	
b) Wages	$\frac{54000 \times 20}{12} \times 0.5 \times \frac{1}{2} = 22500$	
c) O.H Exp	$\frac{54000 \times (20)}{12} \times 0.5 \times \frac{1}{2} = 33750$	168750
iii) Finished Goods	$\frac{54000 \times 100}{12} \times 1$	450000
II) Debtors	$\frac{54000 \times}{12} \times 1 \times 75\%$ s	337500
III) Cash balance		100000
Total Current Assets (A)		1281250
B) : Current Liabilities		
i) Creditors for RMS	$\frac{54000 \times 50}{12} \times 1$	225000
ii) Creditors For Wages	$\frac{54000 \times 20}{360} \times 10$	30000

iii) Creditors for Ho Exp	$\frac{54000 \times 30}{360} \times 30$	135000
Total Current liabilities		390000
Net working Cap (A-B)		891250

PROBLEM NO: 3

Particulars	Calculation	Amount (Rs.)
A) : Current Assets		
I) Inventories		
i) Raw materials	$\frac{1200000 \times 60}{12} \times 1$	
ii) Work-in-process		
a) Raw Material	$\frac{1200000 \times 60}{12} \times 1 = 60000000$	
b) Wages	$\frac{1200000 \times 10}{12} \times 1 \times \frac{1}{2} = 500000$	
c) O.H Exp	$\frac{1200000 \times 20}{12} \times 1 \times \frac{1}{12} = 1000000$	7500000
iii) Finished Goods	$\frac{1200000 \times 90}{12} \times 2$	18000000
II) Debtors	$\frac{1200000 \times 90}{12} \times 2$	18000000
Total Current Assets		495000000
B) : Current Liabilities		
i) Creditors for RMS	$\frac{72000000}{12} \times 2$	6000000
ii) Creditors for Wages	$\frac{1200000 \times 10}{12} \times 1$	1000000
Total Current liabilities		7000000
C) Net working Cap (A - B)		42500000

PROBLEM NO: 4

Statement showing estimation of W cap requirement

Particulars	Calculation	Amount (Rs.)
A) : current Assets:		
I) Inventories		
i) Raw materials	$\frac{900000}{12} \times 2$	75000
ii) Work-in-process		Nill
iii) Finished Goods	$\frac{258000}{12} \times 1$	215000
II) Debtors	$\frac{2940000}{12} \times 2$	490000
III) Cash balance (given)		100000
IV) Pre-paid sales prom exp	$\left(\frac{120000}{4}\right)$	30000
Total Current Assets		9,10,000
B) : Current Liabilities		
i) Creditors for R.M.S	$\frac{900000}{12} \times 2$	

ii) Creditors for wages	$\frac{720000}{12}$ x1	60000
iii) Creditors for Man. Exp	$\frac{960000}{12}$ x1	80000
iv) Creditors for Adm. Exp	$\frac{940000}{12}$ x1	20000
Total Current Liabilities		310000
Net Working Capital (A-B)		600000
Add: Safety margin@20% (600000 x 20%)		120000
Total Working Cap		720000

WORKING NOTE: 1

Calculation of Total Cash Cost

Sales		3600000
Less: Gross Profit@25%	(600000 x 25%)	(900000)
Total Manu cost (A)		2700000
Less: Materials Consumed	900000	
Manufacturing exp		
Less: Cash man exp	(80000 x 12)	960000
Depreciation (B)		120000
Total man Cost (C) = (A)-(B)		2580000
Add: Adm. Exp		240000
Add: Sales promotion exp		120000
Total Cash cost of man & sales		2940000

PROBLEM NO: 5

Particulars	Calculation	Amount (Rs.)
A) : Current Assets		
I) Inventories		
i) Raw materials		8000
ii) Work-in-process		0
iii) Finished Goods		5000
iv) Debtors		
a) Inland sales	$\frac{312000}{52}$ x6	36000
b) Export sales	$\frac{78000}{52}$ x1.5 s	2250
II) Prepaid Exp	$\frac{8000}{4}$	2000
Total Current Assets (A)		**53250**
B) : Current Liabilities		
i) Stores & Materials	$\frac{48000}{12}$ x1.5	6000
ii) Wages	$\frac{260000}{15}$ x1.5	7500
iii) Rent & Royalties	$\frac{10000}{12}$ x6	5000
iv) Clerical Staff	$\frac{62400}{12}$ x0.5	2600
v) Manager	$\frac{4800}{12}$ x0.5	200
vi) Misce Exp.	$\frac{48000}{12}$ x1.5	6000
Total Current Liabilities		**27300**

Net Working Capital (A-B)	25950
Add: Safety margin@10% (25950 x 10%)	2595
Total working capital	28545

PROBLEM NO: 6

Particulars	Calculation	Amount (Rs.)
A) : Current Assets		
I) Inventories		
i) Raw Material	$\frac{(140000+705000-125000)}{12}x2$	12000
ii) Work-in-process		
a) Raw materials	$\frac{720000}{12}x0.5=30000$	
b) Wages & Exp	$\frac{360000}{12}x0.5x0.5=7500$	37500
iii) Finished goods	$\frac{(1200000-120000)}{12}x1$	90000
II) Debtors	$\frac{1080000}{12}x1$	90000
III) Cash balance		35000
Total Current Assets		372500
B) : Current Liabilities		
i) Raw Materials	$\frac{705000}{12}x1$	29375
ii) Adv from Customers		15000
Total Current Liabilities		44375
C) : Net working Cap (A-B)		328125

PROBLEM NO: 7

Step 1: Preparation of rough cost sheet for single and double shift

Particulars	Single Shift (24000)			Double Shift (48000)		
	Unit	cost	Total	Unit	Cost	Total
i) Raw materials	12		288000	10.80		518400
ii) Wages						
Variable (60%)	6			6		
Fixed (40%)	6	10	240000	2	8.00	384000
iii) Overheads						
Variable (20%)	2			2		
Fixed (80%)	8	10	240000	4	6.00	288000
iv) Cost of Production		32	768000		24.8	1190400
v) Profit		4	96000		11.20	537600
vi) Sales		36	864000		36.00	1728000

WORKING: Single – Shift – No of Units

$$\text{No. of units} = \frac{\text{Sales Revenue}}{\text{Selling price}}$$

$$= \frac{864000}{36}$$

$$= 24000$$

Step 2: Statement showing estimation of W cap req for single and double shift

Particulars	Singles shift			Double shift		
	No. of Units	Cost P.U	Amount	No. of Units	Cost P.U	Amount
A) : Current Assets						
I) Inventories						
a) Raw materials	6000	12	72000	12000	10.80	129600
b) W I P	2000	22	44000	2000	18.80	37600
c) Finished Goods	45000	32	1440000	45000	24.80	223200
II) Debtors	6000	32	192000	12000	24.80	297600
Total Current Assess			**452000**			**488000**
B) : Current Liabilities						
i) Creditors for R M S	4000	12	48000	8000	10.80	86400
ii) Creditors for wages	1000	10	10000	2000	8.00	16000
iii) Creditors for O.H Exp	1000	10	10000	2000	6.00	12000
			68000			**114400**
C) : Net Working Cap			384000			573600

PROBLEM NO: 8

Statement showing the requirements of working capital

Particulars	Calculation	Amount (Rs.)
A) : Current Assets		
I) Inventories		
i) Raw material	$\frac{966000}{12} \times 2$	161000
ii) Work-in-process	W.N.2	163500
iii) Finished Goods	$\frac{1465000}{100} \times 10$	146500
iv) Debtors	$\frac{1270800}{12} \times 2$	211800
v) Cash in hand		80000
vi) Pre paid Expenses		
a) Wages & Exp	$\frac{662500}{12} \times 1$	55210
b) Admin. Exp	$\frac{14000}{12} \times 1$	11670
c) Selling & Dist Exp	$\frac{130000}{12} \times 1$	10830s
Total Current Assets		**840510**
B) : Current Liabilities		
i) Creditors for RMS	$\frac{1127000}{12} \times 1.5$	140880
ii) Provision for Taxation	$100000 \times \frac{30}{100}$	30000
Total Current Liabilities		17088
C) : Net working Cap (A-B)		669630

WORKING NOTE: 1

Calculations of stock of Work – in – Progress

Particulars	Calculation	Amount (Rs.)
Raw materials	(840000 x 15%)	126000
Wages & Man Exp	(625000 x 15% x 40%)	37500
Depreciation	(235000 x 15% x 40%)	-
Total		**163500**

WORKING NOTE: 2

Calculations of stock of Finished goods & cost of sales

Particulars	Calculation	Amount (Rs.)
Direct Material cost	840000 + 126000	966000
Wages & Man Exp	625000 + 37500	662500
Depreciation	235000 + 14100	-
Gross Factory cost		1628500
Less: closing W. I. P		(163500)
Cost of goods produced		1465000
Less: closing stock		(146500)
Cost of goods sold		1318500
Add: Administrative Exp		140000
Add: Selling & Distr Exp		130000
Total Cost of sales		1588500
Debtors (80% of cash cost of sales)		1270800

PROBLEM NO: 9

a) Calculation of Ratio of Current assets to total assess

$$\text{Ratio of Current Assets to Total Assets} = \frac{\text{Total Current Assess}}{\text{Total Assets}}$$

$$= \frac{8000}{24000}$$

$$= \frac{1}{3}$$

$$= 1:3$$

b) Calculation of Ratio of Current Liabilities to total Liabilities

$$\text{Ratio of Current Liabilities to Total Liabilities} = \frac{\text{Total Current Liabilities}}{\text{Total Liabilities}}$$

$$= \frac{2000}{24000}$$

$$= \frac{1}{12}$$

$$= 1: 12$$

c) Calculation of net Profitability

Particulars	Calculation	Amount (Rs.)
A) : Return on Assets		
i) On Current Assets	8000 x 2%	160
ii) On Fixed Assets	16000 x 14%	2240
Total Return		2400
B) : Cost of Liabilities		
i) Of Current Liabilities	2000 x 4%	800
ii) Of Lon – Term Liabilities	22000 x 10%	2200
Total cost of Liabilities		2280
C) Net profitability (A-B)		120

PROBLEM NO: 10

Maximum Permissible Bank Finance

Method – I

= 0.75 (CA - CL)

= 0.75 (500 – 150)

= 0.75 (350)

= 262.50

Balance Permissible = 262.50 – 50.00

= 212.50 Lakhs

Method - II

= 0.75 (CA) – CL

= 0.75 (500) – 150

= 375 – 150

= 225

Balance permissible = 225 – 50

= 175 Lakhs

Method – III

= 0.75 (Ca - CCA) – CA

= 0.75 (500 - 200) – 150

= 225 – 150

= 75 – 50 = 25 lakhs

PROBLEM NO: 11

Method – I

MPBF = 0.75 (CA - CL)
= 0.75 (360 - 120)
= 0.75 (240)
= 180

Balance permissible = 180 – 180
= NIL

Method – II

MPBF = .75 (CA) – CL
= 0.75 (360) – 120
= 270 – 120
= 150

Balance = 150 – 180
= (30L)

Method – III

MPBF = 0.75 (CA -CCA) – CL
= 0.75 (360 - 180) – 120L
= 0.75 (180) – 120L
= 135 – 120
= 15L

Balance Perm = 15L – 180L
= (165L)

PROBLEM NO: 12

Calculation of Net operating cycle period

Particulars	Calculation	No of day
i) RMCP	$\frac{50000}{600000}$ x360	30
ii) WIPCP	$\frac{30000}{500000}$ x360	22
iii) FGCP	$\frac{40000}{800000}$ x360	18
iv) DCP		45
Gross operation cycle period		
Less: CPP		30
Net operating cycle period		85 days

PROBLEM NO: 13

Calculation of Net operating cycle period for year1 & year 2

Particulars	Year 1 Calculation	No of days	Year 2 Calculation	No of days
v) RMCP	$\frac{20000}{96000}$ x360	75	$\frac{27000}{135000}$ x360	72
vi) WIPCP	$\frac{14000}{140000}$ x360	36	$\frac{18000}{180000}$ x360	36
vii) FGCP	$\frac{21000}{140000}$ x360	54	$\frac{24000}{180000}$ x360	48s
viii) DCP	$\frac{32000}{160000}$ x360	72	$\frac{50000}{200000}$ x360	90
Gross Op Cp		237		246
Less: CPP	$\frac{16000}{96000}$ x360	(60)	$\frac{18000}{135000}$ x360	(48)
Net operating C.P		177		198

Comment: In year 2 NOCP increased by 22 days because of increase in DCP and reduction in CPP.

PROBLEM NO: 14

Step:1 Rough cost sheet

Particulars	Amount (Rs.)
Opening Raw materials	10000
Add: Purchases	35000
Less: Closing stock	(11000)
Raw materials consumed	34000
Add: wages & man. Exp	15000
Gross works cost	49000
Add: opening stock of W.I.P	30000
Less: Closing stock of W.I.P	(30500)
Net Works cost	48500
Add: Administrative OHS	15000
Cost of production	63500
Add: opening F.GS	5000
Less: closing F.GS	(8500)
Cost of Goods Sold	60000
Add: Selling Dist Exp	10000
Cost of Sales	70000
Add: Profits	30000
Sales	100000

Step: 2 Calculation of Net operating Cycle period

Particulars	Calculation	No of day
i) RMCP	$\frac{(10000+11000)/2}{34000} \times 365$	112.72
ii) WIPCP	$\frac{(30000+30500)/2}{63500} \times 365$	173.87
iii) FGCP	$\frac{(5000+8500)/2}{60000} \times 365$	41.06
iv) DCP	$\frac{(6500+30000)/2}{100000} \times 365$	66.61
Groos operating cycle period		
v) Less CPP	$\frac{(5000+10000)/2}{35000} \times 365$	78.20
Net operating cycle period		316.06 days

Step: 3 Calculation of W Cap requirement

Particulars	Amount (Rs.)
A. : Current Assets	
i) Raw material	11000
ii) Work in progress	30500
iii) Finished Goods	8500
iv) Debtors	30000
v) Cash & Bank	20000
Total Current Assets (A)	100000
B. : Current Liabilities	
Creditors	10000
Total Current Liabilities (B)	10000
C. : Net working capital (A-B)	90000

PROBLEM NO: 15

From she given information

Cash Turnover rate = 4.5

Annual Cash outflow = 175000

i) No. of cycles in a year = $\frac{365}{4.5}$ = 6 cycles

ii) Cash outflow per day = $\frac{175000}{365}$

iii) Cash outflow per cycle = $\frac{175000}{6}$ = 29167

iv) Amount saved of accounts payable can be stretched by 20days = $\frac{175000}{365} \times 20$

= 9589

v) Savings in cost = 9589 x 8%

= 767

PROBLEM NO: 16

Calculation Additional Contribution

Proposed Sales $\frac{25}{2m}$ x 12m	15L
Present Sales $\frac{10L}{1m}$ x 12m	120L
Additional Sales	30L
Contribution Ratio	40%
∴ Additional contribution (30L x 40%)	12L

PROBLEM NO: 17

Step:1 Calculation Incremental PAT

Particulars	Existing	Proposed	Incremental
Sales	120L	180L	60L`
Less: V cost@85%	102L	153L	51L
Contribution	18L	27L	9L
Less: bad debts loss	6L	10.8L	4.8L
Incremental PBT			4.2L
Less: Tax @ 50%			(2.1L)
Incr PAT			2.1L

Step: 2 Calculation of opportunity cost

Particulars	Based on v.c	Based on sales
Proposed Invest in Debtors	2095890 $\left(\frac{180L}{365}x50x85\%\right)$	2465753 $\left(\frac{180L}{365}x50x100\%\right)$
Existing Invest in Debtor	978082 $\left(\frac{120L}{365}x35x85\%\right)$	1150685 $\left(\frac{120L}{365}x35x100\%\right)$
Addition Invest in Debtors	1117808	1315068
Opp COC	20%	20%
Opp Cost	223562	263014s

Step: 2 Calculation of Net benefit

Particulars	Based on v. cost	Based on Sales
Iner PAT (Step 1)	210000	210000
Opp. Cost (Step 2)	223562	263014
Incr Net loss	13562	53014

PROBLEM NO: 18

A. **Benefits**

Contribution Saved = 6cr x 20% = 9.28cr

B. **Costs**

$$\frac{6cr}{365}x(75-45)x80\%x20\%=789041$$

Conclusion: Since incremental carrying cost is less than the incremental profitability, the company should lengthen its credit period from 30 to 60 days.

PROBLEM NO: 19

Step: 1 Calculation PBT

Particulars	Existing	Proposed	Incremental
Sales	150000	172500	22500
Less: Variable cost	112500	129375	(16875)
Less: Bad debts	(1500)	(6900)	(5400)

PROBLEM NO: 20

Evaluation of proposals using incremental approach.

Particular	A	B	C	D
IIncr Sales	25000	35000	60000	80000
Incr contr@40%	10000	14000	24000	32000
Less: Bad Debts	1300	3025	5080	7760
Incr. Net Profit (A)	870010975	18920	24240	
Less: opp cost (B)	2000 $\left(\frac{5L}{360}x10+\frac{25L}{360}x40\right)x60\%x20\%$	3025 $\left(\frac{5L}{360}x15+\frac{35L}{360}x45\right)x60\%x20\%$	6200 $\left(\frac{5L}{360}x30+\frac{60L}{360}x60\right)x60\%x20\%$	8920
Incr. Net benefit (A-B)	S6700	7950	12720	15320

PROBLEM NO: 21

Step: 1 Calculation of Incr PBT

Particulars	Option-I	Option-II
Incremental Sales	450000	900000
Less" Increm. V. cost	(300000)	(600000)
Incr. Contribution	150000	300000
Less: Incr. F cost	Nill	(50000)
Less: Incr. Bad debts	73500	(165000)
	(103500-30000)	(195000-30000)
Incr. PBT	76500	85000

Step: 2 Calculation of opportunity cost

Particulars	Option-I	Option-II
Proposed Invest in Debtors	$\frac{(3450000)}{12}x2x\frac{2}{3}$ 383333	$\frac{3900000}{12}x3x\frac{2}{3}$
Existing Invest in Debtors	$\frac{3000000}{12}x1x\frac{2}{3}$ (166667)	$\frac{3000000}{12}x1x\frac{2}{3}$ (166667)
Addition Invest in Debtors	216667	483333
OPP COC	20%	20%
OPP Cost	43333	96667

Step: 3 Incremental net benefit

Particulars	Option – I	Option – II
Incr. PBT	76500	85000
Opp Cost	43333	96667
Incr Net benefit	33167	(11667)

Conclusion

Sanachandini Limited should adopt the 2 months credit policy as it yields higher return.

PROBLEM NO: 22

Step:1 Calculation of PAT

Particulars	Amount (Rs.)
Incremental Sales	120000
Less: In cr Cost of sales@85%	(102000)
	18000
Less: Bad debts @10%	12000
PBT	6000
Less: Tax@30%	1800
PAT	4200 A

Step: 2 Calculation of opportunity cost

$$\frac{120000}{12} \times 1.5 \times 85\% \times 40 = 5100\,B$$

Step: 3 Incremental Net benefit

In cr net benefit/coss = A-B = 4200 – 5100

Loss = 900

Step: 4 Decision making

Since the estimated profit after tax an additional sales Rs. 4200 is less than the required return on additional investment of Rs. 5100 in receivables, hence the offer should not be accepted.

PROBLEM NO: 23

Evaluation of the different options

(Rs. in Lakhs)

Particulars	Option – I	Option – II	Option – III
In cr Sales	10	20	50
In cr Contribution@40%	4	8	20
Less: Incr Bad debts	1.25	2.60	8.50
Incr Adm cost	0.10	0.30	1.80
Opp cost (W.N.1)	(1.92)	(4.00)	(9.17)
Incr Net benefit	0.73	1.10	0.53

Advise: It is suggested that the Company JKL Ltd should implement option – II which has a credit policy of 2 months.

W.N.1 Calculation of Opp cost

Particulars	Option-I	Option-II	Option-III
Proposed Invest in debits	26.25 $\left(\frac{210}{12} \times 1.5\right)$	36.67 $\left(\frac{220}{12} \times 2\right)$	62.50 $\frac{250}{12} \times 3$
Existing Invest in Debtors $\left(\frac{200}{12} \times 1\right)$	16.67	16.67	16.67
Additional Invest in debtors	9.58	20.00	45.83
Opp COC	20%	20%	20%
Opp Cost	1.92	4.00	9.17

PROBLEM NO: 24

Since the amount of revenue generated is not given in the question, let us consider Rs. 100 as the amount of revenue generated from each type of customer

Particulars	Custom 1	Custom 2	Custom 3	Custom 4
Revenue	100	100	100	100
Less: Cost of sales	85	85	85	85

Fixed cost	5	5	5	5
Bad debts	0	2	10	20
Opp cost (W.N.1)	1.66	1.55	1.48	2.96
Net benefit	6.34	6.45	1.48	12.96

Advise: Customer 4 is advisable

Working: 1 Calculation of opp cost

Cat I = $\frac{100}{365}$ x 45 x 90% x 15% = 1.66

Cat II = $\frac{100}{365}$ x 42 x 90% x 15% = 1.55

Cat III = $\frac{100}{365}$ x 40 x 90% x 15% = 1.48

Cat IV = $\frac{100}{365}$ x 80 x 90% x 15% = 2.96

PROBLEM NO: 25

Step: 1 Calculation of Cost of In-house Descion

Particulars	Amount (Rs.)
Cash – discount (90L x 60% x 2%)	108000
Bad debts loss (90000 x 1%)	90000
Administrative cost	120000
Cost of funds in receivables (Note)	108750
Total Cost	426750

Note: Calculation of Cost of funds in receivables

→ Average investment Debtors

→ Cost of funds

i) Cost of bank funds = 7.5L x ½ x 0.15 = 56250

ii) Cost of owned funds = 7.5L x ½ x 0.14 = 52500

Total cost of funds = **108750**

Step: 1 Calculation of cost of factoring

Particulars	Amount (Rs.)
Factoring Commission (90L x 40%)	360000
Int charges = [0.88 (900L-360000)] x 15% x $\frac{25}{360}$	79200
Cost of own funds invested in receivables	
[90L - 7603200] x 14% x $\frac{25}{360}$	13580
Total cost of Featuring	452780

Descion: PQR Should not go for the factoring atternative as the cost of factoring is more.

PROBLEM NO: 26

Computation of Effective cost of Factoring

Average level of Receivables = 1200000 x $\frac{90}{360}$ = 300000

Factoring commission = 300000 x $\frac{2}{100}$ = 6000

Factoring Reserve = 300000 x $\frac{10}{100}$ = 30000

Amount available for advance = [30000 – (6000 + 30000)] = 264000

Factor will de duct his int @ 16%

Interest = $\frac{264000 \times 16 90}{360 \times 100}$ = Rs.10560

Advance to he paid = 264000 – 10560 = 253440

Annual cost of Featuring to the firm

Factoring commission (6000 x $\frac{360}{90}$)	24000
Interest Charges (10560 x $\frac{360}{90}$)	42240
Total	66240

Firms savings on taking Factoring services:

Cost of Administration Saved	50000
Cost of bad debts (12L x 15%) (Avoided)	18000
Total	68000
Net benefit to the firm (68000 - 66240)	**1760**

Effective cost of factoring = $\frac{66240}{253440} \times 100$ = 26.136%

PROBLEM NO: 27

From The given information

Annual Cash requirement (A) = 1260000

Transaction cost (T) = 20

Cash Carrying Cost (C) = 8%

We Know That

Optimum cash balance as per J. Baumol mode

$= \sqrt{\frac{2AT}{C}}$

$= \sqrt{\frac{2 \times 1260000 \times 0.08}{20}}$

= **Rs. 25100**

PROBLEM NO: 28

Preparation of Cash Budget for Apr, may & June months

Particulars	Apr	May	June
Opening Cash Balance (I)	6000	3950	3000
Add: Cash Receipts			
i) Cash sales	1600	1700	1800
ii) Collection from Debtors (W.N.1)	13050	13950	14850
iii) Advance for sale of Vechinle	-	-	9000
iv) Dividend Received	-	-	1000
Total Cash Receipts (II)	14650	15650	26650

Less: cash payments

i) Payments to creditors	9600	9000	9200
ii) Payments to wages (W.N.2)	3150	3500	4000
iii) Payments for O.H Exp (W.N.3)	1950	2200	2100
iv) Installment for P & M	2000	2000	2250
v) Pref. Div paid	-	-	10000
vi) Adv I. Tax	-	-	2000
Total Cash payments (III)	16700	1600	29550
Closing Cash balance (I+II-III)	3950	3000	300

W.N.1 Calculation of Collection from Debtors

	Apr	Mar	June
Feb	6300	-	-
Mar	6750	6750	-
Apr	-	7200	7200
May	-	-	7650
June	-	-	-
	13050	13950	14850

W.N.2 Calculation of payments of wages

	Apr	May	June
Mar	750	-	-
Apr	24000	800	-
May	-	2700	900
June	-	-	1000
	3150	3500	1900

W.N.2 Calculation of payments for O.H Exp

	Apr	May	June
Mar	950	-	-
Apr	1000	1000	-
May	-	1100	1100
June	-	-	1150
	1950	2100	2250

PROBLEM NO: 29

Cash budget – six months ended june

Particulars	Jan	Feb	Mar	Apr	May	June
Opening Cash balance (i)	1500	3250	1500	(11912)	(15024)	576
Receipts						
Collections from Debtors (W.N-1)	15000	15000	16500	20250	25500	29400
From Sale of premises	-	-	-	-	25000	-
Total Receipts (II)	15000	15000	16500	20250	50500	29400

Cash payments

Payments to creditors (W.N-2)

Payments to Creditors (W.N.-2)	5000	6250	7500	10000	9500	11000
Payments for OH Exp (W.N-3)	2500	3000	4000	3800	5500	5500
Payments for wages (W.N-4)	5750	7500	8142	9562	9900	10237
Purchase of FAS	-	-	-	-	10000	-
Payment of Taxes	-	-	10000	-	-	-
Total payments (iii)	13250	16750	29912	23362	34900	26737
Net cash flow (I + ii + iii)	3250	1500	11912	15024	576	3239

Working (i) Collections from Debtors

Month	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE
Fore cost sales units (i)	1000	1000	1000	1250	1500	2000	1900	2200
Total Sales [(i) x 15]	15000	15000	15000	18750	22500	30000	28500	33000
Collection from debtors								
1 months 40%	-	6000	6000	6000	7500	9000	12000	11400
2 months 60%	-	-	9000	9000	9000	1250	13500	18000
	-	-	15000	15000	16500	20250	25500	29400

Problem No: 30

Given information,

Reduction in mailing float = 2.5 days

Reduction in processing float = 1 day

Opportunity cost of capital = 5%

Average collection per day = Rs. 5,00,000

Evaluation of the proposal of lock box system

Particulars	Amount
A. Cost	
Service Charge of Lock Box System	75,000
B. Benefit	
Reduction in float = 3.5 days Reduction in Average Cash Balance = Rs.5,00,000 x 3.5 = 17,50,000 Savings in opportunity cost of loss of interest = Rs.17,50,000 x 5%	87,500
Net Benefit (A - B)	**12,500**

Conclusion: It is advisable to initiate lock box system.

THE END