University Elective
Financial Management
Numerical solution – WCP

Que. 1

Operating cycle = Inventory Period + A/c receivable period

Cash cycle = Operating cycle – A/c payable period

Firstly, it is required to calculate inventory period, A/c receivable period and A/c payable period.

1) Inventory period = $\frac{\text{Avg. inventory}}{\text{COGS}} \times 360$

↳ Avg. inventory = $\frac{\text{Op. invt.} + \text{cls invt}}{2} = \frac{168000 + 600000}{2}$

$= 384000$

Invt. period = $\frac{384000}{2400000} \times 360 = \boxed{57.6 \text{ days}} \approx \boxed{58 \text{ days}}$

2) A/c receivable period = $\frac{\text{Avg. a/c rec.}}{\text{Credit sales}} \times 360$

↳ Avg. A/c rec. = $\frac{\text{Op. A/c rec.} + \text{cls. a/c rec.}}{2}$

$= \frac{600000 + 500000}{2} = 550000$

A/c rec. period = $\frac{550000}{8000000} \times 360 = \boxed{24.75}$

$\approx \boxed{25 \text{ days}}$

3) Alc payable period = $\frac{\text{Avg. Alc payable}}{\text{COGS}} \times 360$

↳ Avg. alc pay. = $\frac{\text{Op. alc payable} + \text{cls. alc payable}}{2}$

$= \frac{480000 + 240000}{2} = 360000$

Alc pay. period = $\frac{360000}{2400000} \times 360 =$ **54 days** //

Now, Operating cycle = 58 + 25 = **83 days** //.

Cash cycle = 83 − 54 = **29 days** //.

Que.2 In order to calculate working capital requirement, it is required to calculate each current assets & current liabilities &.

Now, in order to calculate debtors, we require to find cash cost as per following working notes:-

WN1 :- Cal^n of manufacturing exp.

Sales	4000000
Less:- gross profit	(880000)
	3120000
Less:- Material	(900000)
Wages	(520000)
Manu. Exp. →	1700000

WN2 – Cal^n of cash manu. exp.

o/s value for two months – 65000

∴ Cash manu. exp. for one year = $65000 \times \frac{12}{2}$

= 390000

WN3 Cal^n of depreciation

Manu. exp.	1700000
– Cash manu. exp.	390000
Depreciation →	1310000

WN4 Cal^n of total cash cost

Total Manu. cost	3120000
– dep^n	1310000
Cash manu. cost	1810000
+ admin. exp.	160000
+ Sales promotion exp.	250000
Total cash cost →	2220000

⇒ Calculation of current assets

1) Debtors (cash cost of 2 months)	370000
2) Raw material stock (Material consumed of 2 months)	150000
3) Finished goods stock (cash. manu. cost of 2 months)	301667
4) Pre-paid sales promotion exp. (quarterly)	62500
5) Cash balance (as given)	120000
Total current assets ⇒	1004167

⇒ Calculation of current liabilities

1) Creditors (material cons. of 1 month)	75000
2) O/s manu. exp. (as given)	65000
3) O/s wages (one month)	43333
Total current liabilities	183333

Calculation of working capital required

Total current assets	1004167
− Total current liabilities	183333
Net working cap.	820833
+ Safety margin	123125
Working cap. req. →	943958

Que.3

1) Invt. period = $\frac{\text{Avg. invt.}}{\text{COGS}} \times 360$

↳ Avg. invt. = $\frac{80000 + 130000}{2} = 105000$

Invt. period = $\frac{105000}{2000000} \times 360 = 18.9 \approx$ **19 days** //

2) Alc rec. period = $\frac{\text{Avg. alc rec.}}{\text{Credit sales}} \times 360$

↳ Avg. alc rec. ~~period~~ = $\frac{100000 + 160000}{2} = 130000$

Alc rec. period = $\frac{130000}{3000000} \times 360 = 15.6 =$ **16 days** //

3) Alc payable period = $\frac{\text{Avg. alc pay.}}{\text{COGS}} \times 360$

↳ Avg. alc pay. = $\frac{120000 + 50000}{2} = 85000$

Alc pay. period = $\frac{85000}{2000000} \times 360 = 15.3 \approx$ **15 days** //

Operating cycle = 19 + 16 = **35 days** //

Cash cycle = 35 − 15 = **20 days** //.

Que. 4

Working Notes

WN1 Cal^n of manu. exp.

Sales	7500000
− Gross profit	(1875000)
Total manu. cost	5625000
− Materials	(4000000)
Wages	(600000)
Manu. Exp. →	1025000

WN2 Cal^n of cash manu. exp.

O/s value for one month 20000

∴ Cash manu. exp. for one year = 20000 × 12

= 240000

WN3 Cal^n of dep^n

Manu. exp.	1025000
− Cash manu. exp.	(240000)
Depreciation →	785000

WN4 Cal^n of total cash cost

Total manu. cost	5625000
− dep^n	(785000)
Cash manu. cost →	4840000
+ admin exp.	(350000)
+ Sales promotion exp.	(300000)
Total cash cost →	5490000

⇒ Cal^n of current assets

1) Debtors	915000
2) Raw material stock	333333
3) Finished goods stock	806667
4) Pre-paid sales promotion exp.	75000
5) Cash balance	125000
Total current assets →	2255000

⇒ Cal^n of current liabilities

1) Creditors	666667
2) o/s manu. exp.	20000
3) o/s wages	50000
Total current liabilities →	736667

Cal^n of working cap. requirement

Total current assets	2255000
− Total current liabilities	736667
Net working capital	1518333
+ Safety margin	303667
Working cap. req. →	1822000

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