Chapter 1

WORKING CAPITAL MANAGEMENT

Exercise 01

You are given the following information of TOP PLC for the financial year 2019.
Receivable Turnover ratio 11.
Inventory Turnover ratio 9.
Payable Turnover ratio 8.

You are required to calculate the length of the working capital cycle for 2019.

Exercise 02

The table below provides the information extracted from CBL PLC.

Rs. Mn	**2019**	**2018**
Raw material	20	15
Work in progress	25	20
Finished goods	15	10
Material Purchase	100	80
Sales	225	162
Cost of goods sold	180	130
Receivables	40	35
Payables	25	20

You are required to calculate the length of the working capital cycle for 2019.

Exercise 03

FN PLC faces a fixed cost of Rs4Mn to obtain new funds. There is a requirement for Rs24Mn of cash over each period of one year for the foreseeable future. The interest cost of new funds is 12% per annum; the interest rate earned on a short term securities is 9% per annum.

Required

Calculate how much finance FN PLC should raise at a time.

Exercise 04

The following data applies to a company.

- The minimum cash balance is Rs8,000.
- The variance of daily cash flow is Rs4,000,000, equivalent to a standard deviation of Rs2,000 per day.
- The transaction cost for buying or selling securities is Rs50. The interest rate is 0.025% per day.

Recommend a decision rule using Miller-Orr model.

Exercise 05

On 19th March 2019 the market price of 9% treasury stock of 2018 is Rs134.1742

Calculate the interest yield

Exercise 06

A bond with coupon rate of 8% is redeemable in nine years' time for Rs100. Its current market price is Rs.91.

Calculate the redemption yield of the bond.

Exercise 07

RB Co is considering a change of credit policy which will result in an increase in the average collection period from one to two months. The relaxation in credit is expected to produce an increase in sales in each year amounting to 25% of the current sales volume.
Selling price per unit Rs. 10,000
Variable cost per unit Rs. 8,500
Current annual sales Rs. 2,400m
The required rate of return on investments is 20%. Assume that the 25% increase in sales would result in additional inventories of Rs. 100m and additional accounts payable of Rs. 20m.

Required:

Advise the company on whether or not to extend the credit period offered to customers, if:
(a) All customers take the longer credit of two months
(b) Existing customers do not change their payment habits, and only the new customers take a full two months credit

Exercise 08

Enticement Co currently expects sales of Rs. 50m a month. Variable costs of sales are Rs. 40m a month (all payable in the month of sale). It is estimated that if the credit period allowed to accounts receivable were to be increased from 30 days to 60 days, sales volume would increase by 20%. All customers would be expected to take advantage of the extended credit.

Required:
If the cost of capital is 12½% a year (or approximately 1% a month), **calculate if** the extension of the credit period is justifiable in financial terms.

Exercise 09
LP Co has annual credit sales of Rs. 12,000m, and three months are allowed for payment. The company decides to offer a 2% discount for payments made within ten days of the invoice being sent, and to reduce the maximum time allowed for payment to two months. It is estimated that 50% of customers will take the discount.

Required:
If the company requires a 20% return on investments, **calculate** the effect of the discount. Assume that the volume of sales will be unaffected by the discount.

Exercise 10

GQ Co achieves current annual sales of Rs1,800Mn. The cost of sales is 80% of this amount, but bad debt average 1% of total sales, and the annual profit is as follows;

	Rs. Mn
Sales	1,800
(-) Cost of sales	1,440
	360
(-) Bad debts	18
Profit	342

The current debt collection period is one month, and the management consider that if credit terms were eased (option A), the effects would be as follows.

	Present policy	**Option A**
Additional sales %	-	25%
Average collection period	01 month	02 month
Bad debs (as a % sales)	1%	3%

The company requires a 20% return on investments. The cost of sales are 75% variable and 25% fixed. Assume there would be no increase in fixed costs from the extra revenue and that there would be no increase in average inventories or accounts payable.

Required:
Identify which is the preferable policy, option A or the present one.

Exercise 11

A company makes annual credit sales of Rs. 1,500m. Credit terms are 30 days, but its debt administration has been poor and the average collection period has been 45 days, with 0.5% of sales resulting in bad debts which are written off. A factor would take on the task of debt administration and credit checking, at an annual fee of 2.5% of credit sales. The company would save Rs. 30m a year in administration costs. The payment period would be 30 days.
The factor would also provide an advance of 80% of invoiced debts at an interest rate of 14% (3% over the current base rate). The company can obtain an overdraft facility to finance its accounts receivable at a rate of 2.5% over base rate.
Required:
Advise whether the factor's services should be accepted. Assume a constant monthly turnover.

Exercise 12
X Co has been offered credit terms from its major supplier of 2/10, net 45. That is, a cash discount of 2% will be given if payment is made within ten days of the invoice, and payments must be made within 45 days of the invoice. The company has the choice of paying Rs.0.98 per Rs. 1 on day 10 (to pay before day 10 would be unnecessary), or to invest the Rs0.98 for an additional 35 days and eventually pay the supplier Rs. 1 per Rs. 1. The decision as to whether the discount should be accepted depends on the opportunity cost of investing 0.98R for 35 days.

Required:
Recommend what the company should do.

Exercise 13
A company uses an item of inventory as follows;
Purchase price : Rs96,000 per unit
Annual demand : 4,000 units
Ordering cost: Rs300,000
Annual holding cost : 10% of purchase price
Economic order quantity 500 units

Required
Advise whether the company should order 1,000 units at a time in order to secure an 8% discount.

Exercise 14

The annual demand for an item of inventory is 125 units. The item costs Rs. 200,000 a unit to purchase, the holding cost for one unit for one year is 15% of the unit cost and ordering costs are Rs. 300,000 an order. The supplier offers a 3% discount for orders of 60 units or more, and a discount of 5% for orders of 90 units or more.

Required:

Calculate the cost-minimising order size.

Question 01

ABC & Company (ABC) is a wholesale distributor of a range of products. ABC is presently making sales of Rs. 160 million per annum, and it extends a credit period of 90 days to its customers.

However, ABC has been experiencing financial difficulties in the short term which are resolved through bank borrowings. The finance manager feels that the receivables could be better managed and has stated that in order to efficiently manage the receivables; the company should adopt a different credit policy.

The finance manager has stated that a credit policy should clearly define how decisions are made in relation to credit standards, length of credit period and cash discounts. He defines them as the key components of a credit policy.

As a first step, in order to overcome the financial difficulties, the finance manager is considering to change the credit period of its credit policy. The proposed credit period and expected sales together with the present position are given below.

Policy	**Present**	**A**	**B**	**C**
Credit period- Days	90	70	50	30
Sales per annum (Rs. million)	160	140	135	120

The firm has a variable cost of 80% of sales and fixed cost of Rs. 10 million per annum. The cost of funds is 20%. Number of days per annum, is to be considered as 360.

Required:

(a) **Assess** each of the policies and **recognize** which policy should be adopted. (4 marks)
(b) **Explain** two (02) matters each to be considered in respect of each of the key components of a credit policy, as defined by the finance manager. (6 marks) **(Total: 10 marks)**

Question 02

CBA (Pvt) Ltd (CBA) is a manufacturing company and the following information has been recorded for its main material.

Monthly production requirement	40,000kg
Average daily consumption	1,600kg
Minimum daily consumption	500kg
Cost of placing an order	Rs. 128,000
Variable cost on insurance and storing **(Note 01)**	Rs. 50 per kg
Finance cost on working capital **(Note 02)**	15% per annum
Basic purchase price per kg	Rs. 5,000
Average lead time	20 days
Minimum lead time	10 days

Note 01:
Storage is outsourced where a fixed monthly retainer charge of Rs. 200,000 is paid in addition to the variable cost.

Note 02:
Working capital is financed using an overdraft facility at 15% annual interest rate payable at each month-end.

Required:

(a) **Explain** two (02) benefits that CBA can gain from better management of inventory.
(2 marks)

(b) **Compute** the following:

(i) Most economical reorder quantity based on Economic Order Quantity (EOQ) model
(ii) Reorder level
(iii) Maximum inventory level
(iv) Minimum inventory level (8 marks) **(Total: 10 marks)**

Question 03

Roomco (Pvt) Ltd (RPL) is a furniture manufacturing company. The working capital requirement of RPL fluctuates between a minimum working capital of Rs. 60 million and a maximum working capital of Rs. 260 million.

At the maximum working capital requirement, bank facilities are utilized in the following manner.

Source of financing	**Amount utilized/Balance outstanding**
Bank overdraft utilized (Approved permanent overdraft facility: Rs. 20 million at 15% p.a.)	Rs. 15 million
Long-term loan: 5 years at 16% p.a. (term loan facility-approved and fully disbursed Rs. 50 million)	Rs. 35 million
Short-term loan (3 months) (Approved facility: Rs. 250 million at 14% p.a.)	Rs. 210 million

You are the accountant of RPL. After attending a workshop titled "Being aggressive or conservative in financing your working capital", you are planning to analyze RPL's working capital financing policy.

Required:

(i) **Identify** the working capital financing policy currently practiced by RPL. (2 marks)
(ii) **State** the advantages and disadvantages of RPL's present working capital financing policy. (3 marks) **(Total: 10 marks)**

Question 04

Most businesses, in their enthusiasm for high growth, often fall into the trap of overtrading.

Required:

(i) **Define** overtrading. (2 marks)

(ii) **Discuss** how overtrading could lead to liquidity issues in an organization. (3 marks)

Question 05

Golly (Pvt) Ltd (GL) has budgeted sales for one of its products for the forthcoming year as 12,500 units, distributed equally throughout the year. Manufacturing of each unit of this product requires 10 units of material Y, which is purchased from the external market.

The following information is also relevant for the forthcoming year:

- GL spends a fixed cost of Rs. 100,000 per month and a variable cost of Rs. 10,000 per order, when ordering materials.

- Unit price of material Y is Rs. 1,000. The holding cost for one unit for one month is 1% of the unit price of material Y.

Required:

(a) **Assess** the order size/quantity for material Y that will minimize the cost of inventory of the company for the forthcoming year. (3 marks)

(b) The supplier has now proposed the following discount scheme for material Y.

Order quantity (units)	**Discount on regular price**
Below 4,700	Nil
4,700 – 6,999	10%
7,000 and above	12%

Assess the revised order size/quantity for material Y that will minimize the cost of inventory of GL for the forthcoming year.

(7 marks) **(Total: 10 marks)**

Question 06

It is important for a business to have the optimum working capital in order to achieve the twin objectives of working capital management.

Required:

Discuss how the two main objectives of working capital management are sometimes in conflict with each other. (4 marks)

Question 07

A trading company currently has sales of Rs. 360 million per year. 80% of the sales are on credit and the balance is on cash basis. The contribution per rupee of credit sales is 25%, whilst that of cash sales is 20%.

Credit customers of the company take 75 days on average to settle invoices.

Due to competition the company has lost market share and is looking for ways to retain its existing customers and also attract new customers. The sales director proposes an early settlement discount of 4% for settlements made within 30 days from the date of sale. The marketing manager suggests that if the early settlement discount scheme is introduced, credit sales could increase by 20% and the cash operating cycle could also improve. It is expected that 75% of the existing credit sales and 100% of new credit sales will be done under early settlement discount scheme. The marketing manager is also confident that the company could retain all its existing customers both cash and credit.

The finance manager has advised that offering an early settlement discount scheme would increase administrative costs by Rs. 500,000 each year. Approximately 2% of the credit sales become bad each year and written off as irrecoverable. However, with the early settlement discount scheme only 2% of credit sales excluding early settlement credit sales are expected to be written off.

The company's overdraft balance as at present is Rs. 50 million and the borrowing rate is 15%. Any excess money available in the company can be placed on deposits at 12%.

Assume that there are 360 days for a year.

Required:

(a) **Assess** whether the introduction of the early settlement discount scheme is financially desirable for the company. (7 marks)

(b) **Explain** with necessary computations whether the cash operating cycle could be improved with the introduction of the early settlement discount scheme as claimed by the marketing manager. (3 marks) **(Total: 10 marks)**