Solutions to VTU Financial Management 22MBA22 June/July 2024

1(a)Aims of finance function

Acquiring funds: The finance function evaluates the business's financial needs and then raises funds to meet them. The funds are sourced based on the business's needs and nature.

- **Managing resources**: The finance function manages the business's financial resources, including:
- **Providing financial information**: The finance function provides financial information to other company operations so they can run efficiently and successfully.
- **Assisting with planning and decision-making**: The finance function helps with the company's planning and decision-making processes

1(b) Factors affecting Dividend Policy

Profitability

A company will only pay dividends if it has made a profit. The amount of the dividend is also determined by the company's profits.

- **Growth opportunities**

Companies with high growth opportunities may retain earnings to fund new projects instead of paying dividends.

- **Debt levels**

High debt levels may lead to lower dividends because the company needs to conserve cash for interest and principal payments.

- **Tax considerations**

Tax benefits associated with dividend policies can influence a company's dividend payouts.

- **Market conditions**

Economic and market conditions can impact dividend decisions. For example, a company may reduce dividends during a downturn.

- **Shareholder preferences**

Some shareholders prefer regular income through dividends, while others may prefer capital gains.

- **Dividend payment history**

Companies with a history of paying dividends tend to keep their dividend amount stable.

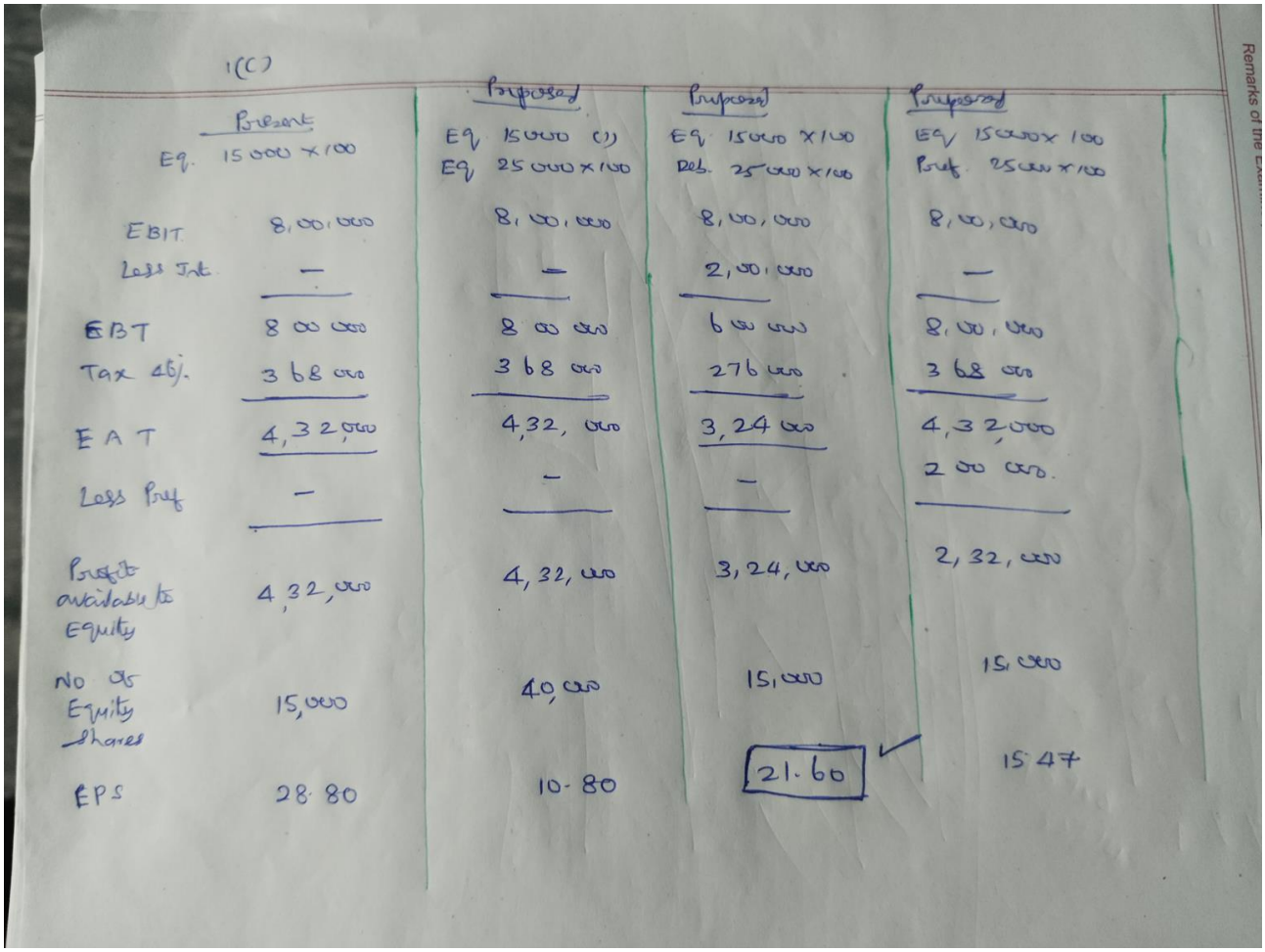
- **Industry norms**

Companies may match the dividend trends of their industry to retain shareholders.

- **Company size**

New companies tend to retain more earnings, while established companies can pay higher dividends.

1(c) Alternative Method of Finance



1(C)	Present	Proposed	Proposed	Proposed
	Eq. 15 000 x 100	Eq 15000 (1) Eq 25 000 x 100	Eq 15000 x 100 Deb. 25 000 x 100	Eq 15000 x 100 Pref. 25000 x 100
EBIT	8,00,000	8,00,000	8,00,000	8,00,000
Less Int.	—	—	2,00,000	—
EBT	8 00 000	8 00 000	6 00 000	8,00,000
Tax 46%	3 68 000	3 68 000	276 000	3 68 000
EAT	4,32,000	4,32,000	3,24 000	4,32,000
Less Pref	—	—	—	2 00 000.
Profits available to Equity	4,32,000	4,32,000	3,24,000	2,32,000
No of Equity shares	15,000	40,000	15,000	15,000
EPS	28·80	10·80	21·60 ✓	15·47

2. (a) Present value and future value

Present value is the current worth of a future sum of money or stream of cash flows. While future value is the amount of money one will have at a certain point in time, taking into account any compounding interest.

(b) Various sources of finance

Sources of finance mean the ways for mobilizing various terms of finance to the industrial concern. Sources of finance state that, how the companies are mobilizing finance for their requirements. The companies belong to the existing or the new which need sum amount of finance to meet the long-term and short-term requirements such as purchasing of fixed assets, construction of office building, purchase of raw materials and day-to-day expenses.

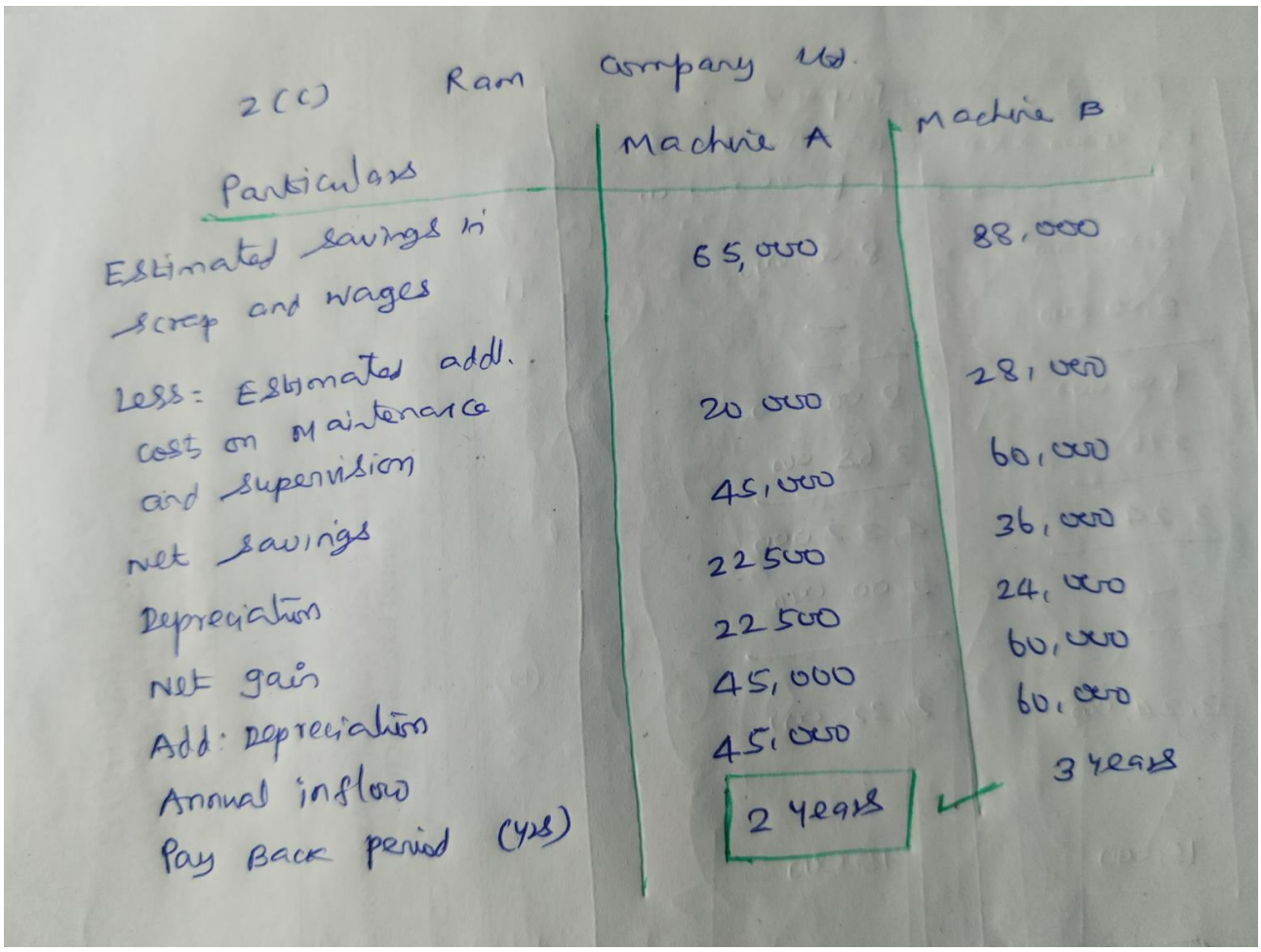
• Sources of finance may be classified under various categories according to the following important heads:

Issue of shares is the main source of long term finance. Shares are issued by joint stock companies to the public. A company divides its capital into units of a definite face value, say of Rs. 10 each or Rs. 100 each. Each unit is called a share. A person holding shares is called a shareholder Whenever a company wants to borrow a large amount of fund for a long but fixed period, it can borrow from the general public by issuing loan certificates called Debentures. • These are offered to the public to subscribe in the same manner as is done in the case of shares. A debenture is issued under the common seal of the company. It is a written acknowledgement of money borrowed. It specifies the terms and conditions, such as rate of interest, time repayment, security offered, etc. Retained Earnings (Internal source of finance) • Like an individual, companies also set aside a part of their profits to meet future requirements of capital. • The portion of the profits which is not distributed among the shareholders but is retained and is used in business is called retained earnings or ploughing back of profits. As per Indian Companies Act., companies are required to transfer a part of their profits in reserves. The amount so kept in reserve may be used to buy fixed assets.This is called internal financing.

The economic development of any country depends on the growth of the business sector. The well developed financial system helps the business to achieve growth by making funds available to them. For which, the government has established financial institutions all over the country to provide finance to businesses.

Special Financial Institutions • 1. Industrial Finance Corporation of India (IFCI) • 2. State Financial Corporations (SFC) • 3. Industrial Credit and Investment Corporation of India (ICICI)

2(c)



3(a) Hybrid Financing

Hybrid financing is the financial instrument that partakes some characteristics of debt and some characteristics of equity.

3(b) PV of Rs.100 @ 10%

1	91.09
3	75.10
4	68.30
5	62.10
Total Discounted cash flows	**296.59**

3(c) Raj Company
Book Value Weights

Type of capital	Book value	Proportion	After-tax cost	Weighted cost%
Debt	400000	0.307692307692308	0.05	1.54%
Preference	100000	0.076923076923077	0.08	0.62%

Equity	600000	0.4615384 61538462	0.15	6.92%
Retained Earnings	200000	0.1538461 53846154	0.13	2.00%
	1300000			**11.08%**

Market Value Weights

Type of capital	**Book value**	**Proportion**	**After-tax cost**	**Weighted cost%**
Debt	380000	0.2248520 71005917	0.05	1.12%
Preference	110000	0.0650887 573964497	0.08	0.52%
Equity	900000	0.5325443 78698225	0.15	7.99%
Retained Earnings	300000	0.1775147 92899408	0.13	2.31%
	1690000			**11.94%**

4(a) Applying Rule 72 = 72/6 = 12 years

The amount will double in 12 years.

4(b) Objectives of FM

1. Profit Maximization

A business is set up with the main aim of earning huge profits. Hence, it is the most important objective of financial management. The finance manager is responsible to achieve optimal profit in the **short run and long run of the business.** The manager must be focused on earning more and more profit. For this purpose, he/she should properly use various methods and tools available.

2. Wealth Maximization

Shareholders are the actual owners of the company. Hence, the company must focus on maximizing the value or wealth of shareholders. The finance manager should try to distribute maximum dividends among the shareholders to keep them happy and to improve the goodwill of the company in the financial market. The declaration of **dividend and payout policy** is decided with the help of financial management. A proper dividend policy related to the declaration of dividends or retaining the company's profit for future growth and development is part of dividend decisions. But this is based on the performance of the company and the amount of profit earned. Better performance means a higher value of shares in the financial market. In nutshell, the finance manager focuses on maximizing the value of shareholders.

3. Maintenance of Liquidity

With the help of proper financial management, the manager can easily **monitor the regular supply of liquidity** in the company. But it is not as easy as it sounds. To maintain the proper cash flow, the manager must keep an eye over all the inflows and outflows of money to reduce the risk of **underflow and overflow of cash.** The finance manager is responsible to maintain an optimal level of liquidity in the organization. **Healthy cash flow** means a higher possibility of survival and success of the business. Because it helps the business to deal with uncertainty, timely payment of dues, getting cash discounts, making day-to-day payments without delays, etc.

4. Proper Estimation of Financial Requirements

Financial management also helps the finance manager in estimating the proper **financial needs** of the company. This means the estimations related to the requirement of capital to start or run a business, the need for fixed and working capital of the company, etc., can be done with effective management of finance. If this management will not be present in the company then there will be a higher possibility of having a **shortage or surplus of finance.** For this estimation, a financial manager checks various factors like the technology used by the organization, the number of employees working, the scale of operations, and the legal requirements of the company to run its business.

5. Proper Mobilization

Financial management helps in the **effective utilization of sources of finance.** It means without wasting them and getting the maximum benefit from the available resources. The finance manager is responsible for managing the different sources of funds such as **shares, debentures, bonds, loans, etc.** So, after estimating the financial requirements, the manager must decide which source of the funds he/she should use to avail the maximum benefit.

6. Proper Utilization of Financial Resources

With proper financial management, the organization can make **optimum utilization of financial resources.** To achieve this, a financial manager has various tools that he/she can use. They include **managing receivables, better management of inventory, and effective payment policy in hand.** This will not only save the finance of the organization but will also reduce the wastage of other resources.

4(c)

Year	0	1	2	3	4	5
Cash Flow	-120	-80	20	60	80	120

The cost of capital is 15 percent. Find MIRR.

Solution:

The percent value of costs will be:

120 + 80 =189.6

The terminal value of cash inflow is: $20(1.15)^4 + 60(1.15)^3 + 80(1.15)^2 + 100($

$= 34.98 + 91.26 + 105.76 + 115 + 120 = 467$

Therefore,

$189.6 = 467 / (1+MIRR)^6$

$(1+MIRR)^6 = 2.463$

$1+ MIRR = 2.463^{1/6} = 1.162$

MIRR= 1.162 - 1

or 16.2%.

5(a) IRR

IRR, or internal rate of return, is a metric used in financial analysis to estimate the profitability of potential investments. IRR is a discount rate that makes the net present value (NPV) of all cash flows equal to zero in a discounted cash flow analysis.

5(b) Cash Conversion Cycle

Days of Inventory Outstanding :

Average Inventory/One Day COGS

99/1.97 = 50 days

Days of Accounts Receivables outstanding:

Average AR/One Day Sales

88/2.19 = 40 days

Days of Accounts Payables outstanding:

Average AP/One Day COGS

58/1.97 = 29 days

Cash Conversion Cycle = DIO + DAR – DAP days

= 90-29 days = **61 days**

5(c) Loan Amortization

40	₹622.84	₹117.45	₹505.39	₹11,239.57
41	₹622.84	₹112.40	₹510.45	₹10,729.13
42	₹622.84	₹107.29	₹515.55	₹10,213.57
43	₹622.84	₹102.14	₹520.71	₹9,692.86
44	₹622.84	₹96.93	₹525.92	₹9,166.95
45	₹622.84	₹91.67	₹531.18	₹8,635.77
46	₹622.84	₹86.36	₹536.49	₹8,099.29
47	₹622.84	₹80.99	₹541.85	₹7,557.43
48	₹622.84	₹75.57	₹547.27	₹7,010.16
49	₹622.84	₹70.10	₹552.74	₹6,457.42
50	₹622.84	₹64.57	₹558.27	₹5,899.15
51	₹622.84	₹58.99	₹563.85	₹5,335.30
52	₹622.84	₹53.35	₹569.49	₹4,765.81
53	₹622.84	₹47.66	₹575.19	₹4,190.62
54	₹622.84	₹41.91	₹580.94	₹3,609.68
55	₹622.84	₹36.10	₹586.75	₹3,022.93
56	₹622.84	₹30.23	₹592.62	₹2,430.32
57	₹622.84	₹24.30	₹598.54	₹1,831.78
58	₹622.84	₹18.32	₹604.53	₹1,227.25
59	₹622.84	₹12.27	₹610.57	₹616.68
60	₹622.84	₹6.17	₹616.68	₹0.00

36	₹622.84	₹137.17	₹485.67	₹13,231.33
37	₹622.84	₹132.31	₹490.53	₹12,740.80
38	₹622.84	₹127.41	₹495.44	₹12,245.36
39	₹622.84	₹122.45	₹500.39	₹11,744.97
40	₹622.84	₹117.45	₹505.39	₹11,239.57

6(a) Optimum Capital Structure

An optimal capital structure is the best mix of debt and equity financing that a company can use to maximize its value while minimizing its cost of capital. It's a financial strategy that helps companies balance risk and profitability, and is crucial for long-term growth and competitiveness.

6(b) Factors affecting working capital requirements

1. Business size:

One of the most important factors affecting working capital requirement is the size of a business and the scale of its operations. A company that has multiple manufacturing units and operates on a large scale will have a large working capital requirement. However, they will also have better economic performance because of better bargaining power when compared to smaller business units.

2. Operating cycle length

The operating cycle length, also known as the cash conversion cycle, is a financial metric that measures the time it takes for a company to convert its investments in inventory and other resources

into cash inflows. It provides insights into the efficiency of a company's working capital management and operational processes. The operating cycle is typically divided into three main components:

a. Days inventory outstanding (DIO): Represents the average number of days it takes for a company to sell its inventory. It is calculated as:

DIO = Average Inventory / Cost of Goods Sold (COGS) per day

b. Days sales outstanding (DSO): Reflects the average number of days it takes for a company to collect payment from its customers. It is calculated as:

DSO = Accounts receivable / Net Sales Per Day

c. Days payable outstanding (DPO): Represents the average number of days a company takes to pay its suppliers. It is calculated as:

DPO = Accounts Payable / Cost of Goods Sold (COGS) per day

The operating cycle length is then calculated as the sum of DIO, DSO, and DPO:

Operating Cycle Length **= DIO + DSO + DPO**

Interpretation:

- A shorter operating cycle indicates that a company is efficiently converting its investments into cash, which is generally favourable.
- A longer operating cycle may suggest inefficiencies in inventory management, receivables collection, or payables management.

- Efficient working capital management aims to minimise the operating cycle length, ensuring that the company's resources are utilised effectively to generate cash flow.
- Monitoring and analysing the components of the operating cycle help identify areas for improvement in inventory turnover, receivables collection, and payables management.

3. Seasonality

Many season-specific businesses don't see much sales throughout the year. Instead, they witness a surge in sales during a particular season only. For example, businesses selling woollen garments or umbrellas/raincoats experience a surge in demand during winters and monsoons respectively.

The rise in demand lasts for a few weeks or maximum for a few months. The business invariably requires more working capital to meet the increased demand during the period which illustrates why seasonality is one of the crucial factors affecting working capital requirement.

4. Scale of operations

Larger companies typically have more extensive operations, including higher sales volumes and larger production capacities. This can result in higher levels of inventory and receivables, influencing a larger working capital requirement. Smaller businesses may have limited production capacity and lower sales volumes, leading to comparatively lower levels of inventory and receivables. Their working capital needs may be more manageable in scale.

5. Business sales

The volume of sales significantly influences the working capital needs of a business. When aiming to boost sales, an entity must uphold substantial levels of current assets, including inventory and cash. This strategic approach ensures the capacity to meet demand and sustain daily operations.

6. Technology and production cycle

The choice of technology in the production process is one of the pivotal factors affecting working capital requirement. In scenarios where a company adopts a labor-intensive production approach, there's a heightened need for working capital to ensure a consistent cash flow for compensating laborers. Conversely, if the production process relies on machine-intensive techniques, the demand for working capital is notably reduced.

Additionally, the duration of the production cycle plays a crucial role. A business engaged in a prolonged production cycle necessitates more working capital due to the extended time required to transform raw materials into finished goods. Conversely, a shorter production cycle correlates with reduced working capital needs, as fewer funds are essential for inventory maintenance and raw material procurement.

7. Inventory management

The inventory management policy adopted by a company holds significant sway over its working capital needs. Even for smaller businesses, a substantial working capital requirement becomes imperative when dealing with extensive inventories, irrespective of the turnover pace.

To illustrate the importance of inventory management, consider this scenario: Imagine a business owner opting to accumulate raw materials well in advance of production. In such a case, the working capital requirement surges significantly as resources remain tied up until the entire production process concludes.

Contrastingly, envision a company embracing the JIT (Just In Time) inventory management policy, where raw materials are sourced precisely when the need arises. In this scenario, the working capital requirement diminishes substantially.

8. Collection cycle

The average timeframe required to collect proceedings of sale is referred to as the collection cycle. Influential factors, such as industry norms and the creditworthiness of clients, shape the dynamics of this cycle.

Opting for a liberal collection cycle places a higher demand on working capital, as funds are tied up for an extended period. On the contrary, a business adhering to a short-term or stringent credit policy can function efficiently with reduced working capital requirements. Strategic decisions regarding the collection cycle play a crucial role in balancing cash flow and optimising overall financial stability.

9. Credit availability

Credit availability, the duration a business takes to receive credit from suppliers, is one of the key factors affecting working capital requirement. This factor is particularly significant for smaller businesses where payments drive sales and contribute to securing additional orders. The intricacies

of credit availability become especially apparent in scenarios involving missed or deferred payments, directly impacting the working capital equation.

Consider a business owner facing short-term liabilities or having utilised a working capital loan previously. In such cases, the working capital costs, including repayment, contribute to heightened working capital requirements.

Contrastingly, when a business benefits from favorable terms for raw materials and ensures timely payments, the working capital requirement diminishes significantly. Strategic management of credit availability not only influences cash flow but plays a vital role in optimising overall working capital efficiency.

10. Inflation

Fluctuations in raw material and labor costs can significantly impact a company's working capital needs. When faced with cost increases, there is a natural escalation in the requirement for working capital. However, a strategic counterbalance comes into play when a company can concurrently adjust the prices of its products.

In a scenario where a company can effectively raise product prices in response to increased costs, the impact on working capital is mitigated, and the need for additional funds is reduced.

It's essential to recognise that the effects of price increases vary across different businesses. Each industry and business model respond uniquely to such shifts, highlighting the importance of a nuanced understanding of working capital dynamics in the face of evolving cost structures.

11. Competition

In a competitive market, businesses find themselves compelled to adopt a liberal credit policy and ensure timely delivery of goods to stay competitive. Effectively managing large inventories becomes a necessity, driving the requirement for a higher level of working capital. This proactive approach enables businesses to meet customer demands promptly and maintain a competitive edge.

Conversely, in situations where competition is limited, or a business holds a monopoly position, the dynamics shift. With the ability to dictate terms and conditions, businesses in such scenarios require less working capital. The reduced competition empowers them to set the pace, emphasising the strategic influence of market conditions on working capital needs.

6(C) Financial System

(c) Indian Financial System: Financial Market

A Financial Market is a platform or system where individuals, businesses, and governments can buy and sell various financial instruments such as stocks, bonds, currencies, commodities, and derivatives. It is a mechanism through which participants can trade assets, manage risks, and raise capital.

Types of Financial Markets

There are different types of Financial Market, including:

Financial Market Description

Stock Market Market for buying and selling shares (ownership) of publicly traded companies. Investors can purchase shares to gain ownership and potentially earn returns through capital appreciation and dividends.

Bond Market Market for trading debt securities (bonds) issued by governments, corporations, and municipalities. Investors buy bonds and receive periodic interest payments and the return of principal amount at maturity.

Foreign Exchange Market (Forex) Market for exchanging one currency for another. Participants include individuals, businesses, and financial institutions. Forex trading facilitates international trade and investment, and currency speculation.

Commodity Market Market for buying and selling commodities like gold, oil, agricultural products, and metals. Investors trade commodity contracts, either for immediate delivery or future delivery at a predetermined price.

Derivatives Market Market for financial instruments derived from underlying assets, such as options, futures, and swaps. Derivatives allow investors to speculate on price movements, manage risks, and hedge against potential losses.

Money Market Market for short-term borrowing and lending of funds. Participants include banks, corporations, and governments. Money market instruments have high liquidity and short maturities, such as Treasury bills and commercial paper.

Capital Market Market for long-term borrowing and lending of funds. It includes both the stock market and bond market, enabling companies and governments to raise capital for investment and expansion.

Insurance Market Market for insurance policies where individuals or entities transfer risk to insurance companies in exchange for premiums. Insurance markets offer coverage for various risks, including life, health, property, and liability.

Real Estate Market Market for buying, selling, and renting properties such as land, residential homes, and commercial buildings. Real estate markets involve transactions, investments, and the development of physical properties.

Futures Market Market for trading futures contracts that obligate buyers and sellers to transact a specific asset at a predetermined price and date in the future. It allows participants to speculate on price movements and manage risks.

These financial markets serve different purposes and cater to various investment needs and risk profiles. They collectively contribute to the overall functioning and efficiency of the global financial system

Financial Instruments

Cash Instruments

Cash instruments can easily be transferred and valued in the market. Also, market conditions directly influence the value of these financial instruments. The two types of cash instruments are –

Securities: This financial instrument has a monetary value and trade on the stock market. While purchasing security (share), it represents a part of the ownership of a publicly traded company on the stock exchange.

Deposits and Loans: Both are cash instruments because they represent monetary assets and bind both parties in a contractual agreement.

Derivative Instruments

Derivative instruments derive their value from the underlying asset such as resources, currency, bonds, stocks, indices, etc. The performance of derivatives instruments is dependent on the performance of the underlying assets. The following are the most common types of derivative instruments –

Forward: A forward contract is a customized agreement. It is between two parties that involve the exchange of an underlying asset at a specific exchange during a specific time period.

Future: This is a derivative contract that involves the exchange of derivatives on a future date at a predetermined exchange rate.

Options: An option is a derivative contract between two parties. Here, the buyer gets the right to purchase or sell the underlying asset at a predetermined price for a specific time period. However, there is no obligation to exercise the right.

Interest Rate Swap: This is a derivative contract between two parties. It involves the exchange of interest rates where one party agrees to pay the other party's interest rate on their loans in different currencies.

Foreign Exchange Instruments

Foreign exchange instruments are represented in foreign markets and consist of currency agreements and derivatives. These are the most liquidated and most significant markets for trading volume in the world. The trading volume varies in trillions of dollars. Many financial institutions, brokers and banks deal with these instruments as the forex market is open 24 hours a day but closed on holidays.

They are further divided into three categories –

Spot: In this currency agreement the actual exchange of currency is no later than the second working day after the original date of the agreement. This is referred to as 'spot' because the currency exchange is done on the spot (limited timeframe).

Outright Forwards: In this currency agreement, the actual exchange of currency is done 'forwardly' and before the actual date of the agreed requirement. This is beneficial in case of fluctuating exchange rates.

Currency Swap: It refers to the simultaneous buying and selling of currencies with different specified value dates.

Asset Classes of Financial Instruments

The financial instruments can be divided into two asset classes –

Debt-Based: Through these financial instruments a company or entity can use to raise the amount of capital in a business. They come with a fixed maturity period. They enable companies to increase their profitability through capital growth. Some common examples are bonds, debentures, etc. Cash instruments in the form of loans and exchange-traded derivatives in the form of bond futures are an example of debt-based financial instruments. Monetary instruments like certificates of deposits (CDs) and exchange-traded derivatives like short-term interest rate futures also come under this category.

Equity-Based: These financial instruments serve as legal ownership of a company. Typical examples are stocks, convertible debentures, preferred stock and transferable subscription rights. They help companies to grow over a period of time. Unlike debt, they are not responsible for paying back the holders. Therefore, any company that owns an equity-based instrument can either choose to invest further in the instrument or sell it whenever necessary.

Central Registry of Securitisation Asset Reconstruction and Security Interest of India (CERSAI)

India Infrastructure Finance Company Ltd (IIFCL)

Industrial Finance Corporation of India (IFCI)

National Bank of Financing Infrastructure and Development

National Credit Guarantee Trustee Company Ltd (NCGTC)

National Housing Bank (NHB)

Small Industries Development Bank of India(SIDBI)

Acuite Ratings & Research Limited

Financial institutions are the cornerstone of our economy, offering a multitude of services that enable individuals and businesses to manage their finances. From providing loans and mortgages to facilitating investments and insurance, these institutions play a crucial role in driving economic growth and stability.

With their expertise, resources, and innovative solutions, financial institutions empower individuals to achieve their financial goals and navigate the complexities of the financial world.

Commercial Banks

A commercial bank is a financial institution that accepts money from individuals and businesses and provides loans to those in need. They offer services such as loans, savings, certificates of deposits, bank accounts, bank overdrafts, etc., to their customers. These organizations earn money by granting loans to individuals and gaining interest on loans. Business loans, house loans, personal loans, car loans, and education loans are the different types of loans offered by commercial banks.

Investment Banks

Investment banking helps individuals, organizations, governments, and other institutions raise capital and provide financial consultancy advice. They don’t deal with customer deposits but rather assist with financing through securities such as bonds and stocks.

Insurance Companies

Insurance companies are familiar kinds of non-bank financial institutions. They offer insurance services to both individuals and organizations. The insurance can be related to the protection against financial risk, life insurance, health, home, shop, company, products, vehicles, etc. These institutions put the money from insurance premiums into a pool to fund the policy coverage. Insurance companies can be necessary for the stability of financial systems mainly because they are significant investors in financial markets. As a result of the growing links between insurers and banks, insurers are insuring the risks of households and firms to guarantee their financial stability.

Brokerage Firms

A brokerage firm or company is a middleman who connects the buying and selling parties to facilitate the transaction. They assist in the dealing of securities such as stocks, mutual funds, shares, bonds, options, and other financial instruments. Once the transaction is completed, brokers receive both parties' brokerage (commission). Some brokerage companies also provide financial advice and act as consultants.

7(a) CAPM

This is a popular approach to estimate the cost of equity. According to the CAPM, the cost of equity capital is: Ke = Rf + (Rm - Rf) ß Where: Ke = Cost of equity Rf = Risk-free rate Rm = Equity market required return (expected return on the market portfolio) ß = beta is Systematic Risk Coefficient. Beta is the measure of market risk. Market risk is the risk that cannot be diversified away.

7(b) OL, FL and CL calculation

7(b)

	A	B
Sales	60,000 × 30	15,000 × 250
Sales value	18,00,000	37,50,000
Less V/C	6,00,000	11,25,000
Contribution	12,00,000	26,25,000
Less FC	7,00,000	14,00,000
Profit (EBIT)	5,00,000	12,25,000
Less Interest 12%	48,000	78,000
EBT	4,52,000	11,47,000

OL = C / EBIT = 12,00,000 / 5,00,000 = 2.4

FL = EBIT / EBT = 5,00,000 / 4,52,000 = 1.11

CL = C / EBT = 12,00,000 / 4,52,000 = 2.65

OL = 26,25,000 / 12,25,000 = 2.14

FL = 12,25,000 / 11,47,000 = 1.07

CL = 26,25,000 / 11,47,000 = 2.29

7(c)

(i) NPV

Year	Cash inflow	12% Discounted Rate	Discounted cash flow
0	-100000		
1	20,000	0.8929	17,858
2	30,000	0.7972	23,916
3	40,000	0.7118	28,472
4	50,000	0.6355	31,775
5	30,000	0.5674	17022
		Total Discounted cash flows	1,19,043

Interpretation: Under NPV, if the discounted cash flows are Positive, the project can be accepted.

(ii) BCR/PI

Present value of discounted cash flows/Initial Investment

=119043/100000

=119%

If PI more than 100%, the project can be accepted

(iii) PBP

Year	Cash inflow	Cumulative Cash inflows
0	-100000	--
1	20,000	20,000
2	30,000	50,000
3	40,000	**90,000**
4	50,000	1,40,000
5	30,000	1,70,000
		3 years + 10,000/50,000
		3 Years and 3 Months

8(c)

VTU QP 7(c) solution

Calculation of amount of Depreciation (in Rs.)

Sales	36,00,000	
Less GP (3600000 × 25%)	9,00,000	
COGS	27,00,000	(A)
Less Material	9,00,000	
" Wages	7,20,000	
	16,20,000	(B)
Manufacturing exp.	10,80,000	(A) − (B)
Less: Cash Mfg. exp. (80000 × 12)	9,60,000	
Depreciation	1,20,000	

Calculation of cost of sales

COGS − Depreciation = 27,00,000 − 1,20,000 = 25,80,000

Add: Administration expenses	2,40,000
Sales promotion "	1,20,000
Cash cost of sales	3,60,000

∴ Cost of sales = 25,80,000 + 3,60,000

= 29,40,000

Statement showing working capital Requirement

Current Assets

(i) R/M	9,00,000 × 1/12 =	75,000	
(ii) FG	2580,000 × 1/12 =	215,000	
(iii) Debtors (2940,000 × 3/12)	=	4,90,000	
(iv) Prepaid Sales promotion exp (120,000 × 3/12)	=	30,000	
(v) Cash	=	100,000	9,10,000
Total current assets			

Current Liabilities

(i) Creditors for material (9,00,000 × 2/12)	1,50,000	
(ii) creditors for mfg. exp	80,000	
(iii) " for wages (7,20,000 × 1/12)	60,000	
(iv) " for administration exp. (2,40,000 × 1/12)	20,000	
Total current liabilities		3,10,000
Net working capital		6,00,000
Add:- 20% margin		1,20,000
working capital required		7,20,000