PAPER – 8: FINANCIAL MANAGEMENT & ECONOMICS FOR FINANCE

PART A: FINANCIAL MANAGEMENT

QUESTIONS

Ratio Analysis

1. Assuming the current ratio of a Company is 2, STATE in each of the following cases whether the ratio will improve or decline or will have no change:

   (i) Payment of current liability

   (ii) Purchase of fixed assets by cash

   (iii) Cash collected from Customers

   (iv) Bills receivable dishonoured

   (v) Issue of new shares

Cost of Capital

2. M/s. Navya Corporation has a capital structure of 40% debt and 60% equity. The company is presently considering several alternative investment proposals costing less than ₹ 20 lakhs. The corporation always raises the required funds without disturbing its present debt equity ratio.

   The cost of raising the debt and equity are as under:

Project cost	Cost of debt	Cost of equity
Upto ₹ 2 lakhs	10%	12%
Above ₹ 2 lakhs & upto to ₹ 5 lakhs	11%	13%
Above ₹ 5 lakhs & upto ₹10 lakhs	12%	14%
Above ₹10 lakhs & upto ₹ 20 lakhs	13%	14.5%

   Assuming the tax rate at 50%, CALCULATE:

   (i) Cost of capital of two projects X and Y whose fund requirements are ₹ 6.5 lakhs and ₹ 14 lakhs respectively.

   (ii) If a project is expected to give after tax return of 10%, DETERMINE under what conditions it would be acceptable?

Capital Structure Decisions

3. Rounak Ltd. is an all equity financed company with a market value of ₹ 25,00,000 and cost of equity (K_e) 21%. The company wants to buyback equity shares worth ₹ 5,00,000 by issuing and raising 15% perpetual debt of the same amount. Rate of tax may be taken as 30%. After the capital restructuring and applying MM Model (with taxes), you are required to COMPUTE:

(i) Market value of J Ltd.

(ii) Cost of Equity (K_e)

(iii) Weighted average cost of capital (using market weights) and comment on it.

Leverage

4. A firm has sales of ₹ 75,00,000 variable cost is 56% and fixed cost is ₹ 6,00,000. It has a debt of ₹ 45,00,000 at 9% and equity of ₹ 55,00,000. You are required to INTERPRET:

(i) The firm's ROI?

(ii) Does it have favourable financial leverage?

(iii) If the firm belongs to an industry whose capital turnover is 3, does it have a high or low capital turnover?

(iv) The operating, financial and combined leverages of the firm?

(v) If the sales is increased by 10% by what percentage EBIT will increase?

(vi) At what level of sales the EBT of the firm will be equal to zero?

(vii) If EBIT increases by 20%, by what percentage EBT will increase?

Capital Budgeting

5. Shiv Limited is thinking of replacing its existing machine by a new machine which would cost ₹ 60 lakhs. The company's current production is 80,000 units, and is expected to increase to 1,00,000 units, if the new machine is bought. The selling price of the product would remain unchanged at ₹ 200 per unit. The following is the cost of producing one unit of product using both the existing and new machine:

			Unit cost (₹)
	Existing Machine (80,000 units)	**New Machine (1,00,000 units)**	**Difference**
Materials	75.0	63.75	(11.25)
Wages & Salaries	51.25	37.50	(13.75)
Supervision	20.0	25.0	5.0
Repairs and Maintenance	11.25	7.50	(3.75)
Power and Fuel	15.50	14.25	(1.25)
Depreciation	0.25	5.0	4.75
Allocated Corporate Overheads	10.0	12.50	2.50
	183.25	165.50	(17.75)

The existing machine has an accounting book value of ₹ 1,00,000, and it has been fully depreciated for tax purpose. It is estimated that machine will be useful for 5 years. The supplier of the new machine has offered to accept the old machine for ₹ 2,50,000. However, the market price of old machine today is ₹ 1,50,000 and it is expected to be ₹ 35,000 after 5 years. The new machine has a life of 5 years and a salvage value of ₹ 2,50,000 at the end of its economic life. Assume corporate Income tax rate at 40%, and depreciation is charged on straight line basis for Income-tax purposes. Further assume that book profit is treated as ordinary income for tax purpose. The opportunity cost of capital of the Company is 15%.

Required:

(i) ESTIMATE net present value of the replacement decision.

(ii) CALCULATE the internal rate of return of the replacement decision.

(iii) Should Company go ahead with the replacement decision? ANALYSE.

Year (t)	1	2	3	4	5
$PVIF_{0.15,t}$	0.8696	0.7561	0.6575	0.5718	0.4972
$PVIF_{0.20,t}$	0.8333	0.6944	0.5787	0.4823	0.4019
$PVIF_{0.25,t}$	0.80	0.64	0.512	0.4096	0.3277
$PVIF_{0.30,t}$	0.7692	0.5917	0.4552	0.3501	0.2693
$PVIF_{0.35,t}$	0.7407	0.5487	0.4064	0.3011	0.2230

Management of Receivables (Debtors)

6. Tony Limited, manufacturer of Colour TV sets is considering the liberalization of existing credit terms to three of their large customers A, B and C. The credit period and likely quantity of TV sets that will be sold to the customers in addition to other sales are as follows:

Quantity sold (No. of TV Sets)

Credit Period (Days)	A	B	C
0	1,000	1,000	-
30	1,000	1,500	-
60	1,000	2,000	1,000
90	1,000	2,500	1,500

The selling price per TV set is ₹ 9,000. The expected contribution is 20% of the selling price. The cost of carrying receivable averages 20% per annum.

You are required:

(a) COMPUTE the credit period to be allowed to each customer.

(Assume 360 days in a year for calculation purposes).

(b) DEMONSTRATE the other problems the company might face in allowing the credit period as determined in (a) above?

Financing of Working Capital

7. A company is considering its working capital investment and financial policies for the next year. Estimated fixed assets and current liabilities for the next year are ₹ 2.60 crores and ₹ 2.34 crores respectively. Estimated Sales and EBIT depend on current assets investment, particularly inventories and book-debts. The financial controller of the company is examining the following alternative Working Capital Policies:

(₹ Crores)

Working Capital Policy	Investment in Current Assets	Estimated Sales	EBIT
Conservative	4.50	12.30	1.23
Moderate	3.90	11.50	1.15
Aggressive	2.60	10.00	1.00

After evaluating the working capital policy, the Financial Controller has advised the adoption of the moderate working capital policy. The company is now examining the use of long-term and short-term borrowings for financing its assets. The company will use ₹ 2.50 crores of the equity funds. The corporate tax rate is 35%. The company is considering the following debt alternatives.

(₹ Crores)

Financing Policy	Short-term Debt	Long-term Debt
Conservative	0.54	1.12
Moderate	1.00	0.66
Aggressive	1.50	0.16
Interest rate-Average	12%	16%

You are required to CALCULATE the following:

(i) Working Capital Investment for each policy:

  (a) Net Working Capital position

  (b) Rate of Return

  (c) Current ratio

(ii) Financing for each policy:

  (a) Net Working Capital position.

  (b) Rate of Return on Shareholders' equity.

  (c) Current ratio.

Risk Analysis in Capital Budgeting

8. Gauav Ltd. using certainty-equivalent approach in the evaluation of risky proposals. The following information regarding a new project is as follows:

Year	Expected Cash flow	Certainty-equivalent quotient
0	(4,00,000)	1.0
1	3,20,000	0.8
2	2,80,000	0.7
3	2,60,000	0.6
4	2,40,000	0.4
5	1,60,000	0.3

Riskless rate of interest on the government securities is 6 per cent. DETERMINE whether the project should be accepted?

Lease Financing

9. XYZ Ltd. requires an equipment costing ₹50,00,000; the same will be utilized over a period of 5 years. It has two financing options in this regard:

(i) Arrangement of a loan of ₹50,00,000 at an interest rate of 14 percent per annum; the loan being repayable in 5 equal year end instalments; the equipment can be sold at the end of fifth year for ₹5,00,000.

(ii) Leasing the equipment for a period of five years at an early rental of ₹16,50,000 payable at the year end.

The rate of depreciation is 15 percent on Written Down Value (WDV) basis, income tax rate is 35 percent and discount rate is 12 percent.

ADVISE which of the financing options should XYZ Ltd. exercise and why?

Dividend Decisions

10. The earnings per share of a company is ₹ 10 and the rate of capitalisation applicable to it is 10 per cent. The company has three options of paying dividend i.e. (i) 50%, (ii) 75% and (iii) 100%.

CALCULATE the market price of the share as per Walter's model if it can earn a return of (a) 15, (b) 10 and (c) 5 per cent on its retained earnings.

Miscellaneous

11. (i) "The profit maximization is not an operationally feasible criterion." IDENTIFY.

(ii) EXPLAIN the difference between Financial Lease and Operating Lease.

SUGGESTED HINTS/ANSWERS

1. Current Ratio = $\frac{\text{Current Assets (CA)}}{\text{Current Liabilities (CL)}}$ = 2 i.e. 2 : 1

S. No.	Situation	Improve/ Decline/ No Change	Reason
(i)	Payment of Current liability	Current Ratio will improve	Let us assume CA is ₹ 2 lakhs & CL is ₹ 1 lakh. If payment of Current Liability = ₹10,000 then, CA = 1, 90,000 CL = 90,000. Current Ratio = $\frac{1,90,000}{90,000}$ = 2.11 : 1. When Current Ratio is 2:1 Payment of Current liability will reduce the same amount in the numerator and denominator. Hence, the ratio will improve.
(ii)	Purchase of Fixed Assets by cash	Current Ratio will decline	Since the cash being a current asset converted into fixed asset, current assets reduced, thus current ratio will fall.
(iii)	Cash collected from Customers	Current Ratio will not change	Cash will increase and Debtors will reduce. Hence No Change in Current Asset.
(iv)	Bills Receivable dishonoured	Current Ratio will not change	Bills Receivable will come down and debtors will increase. Hence no change in Current Assets.
(v)	Issue of New Shares	Current Ratio will improve	As Cash will increase, Current Assets will increase and current ratio will increase.

2. (i) Statement of Weighted Average Cost of Capital

Project cost	Financing	Proportion of capital Structure	After tax cost (1–Tax 50%)	Weighted average cost (%)
Upto ₹ 2 Lakhs	Debt	0.4	10% (1 – 0.5) = 5%	0.4 × 5 = 2.0
	Equity	0.6	12%	0.6 × 12 = 7.2
				9.2%

Above ₹ 2 lakhs & upto to ₹ 5 Lakhs	Debt	0.4	11% (1 – 0.5) = 5.5%	0.4 × 5.5 = 2.2
	Equity	0.6	13%	0.6 × 13 = 7.8
				10.0%
Above ₹ 5 lakhs & upto ₹ 10 lakhs	Debt	0.4	12% (1 – 0.5) = 6%	0.4 × 6 = 2.4
	Equity	0.6	14%	0.6 × 14 = 8.4
				10.8%
Above ₹ 10 lakhs & upto ₹ 20 lakhs	Debt	0.4	13% (1 – 0.5) = 6.5%	0.4 × 6.5 = 2.6
	Equity	0.6	14.5%	0.6 × 14.5 = 8.7
				11.3%

Project	Fund requirement	Cost of capital
X	₹6.5 lakhs	10.8% (from the above table)
Y	₹14 lakhs	11.3% (from the above table)

(ii) If a Project is expected to give after tax return of 10%, it would be acceptable provided its project cost does not exceed ₹ 5 lakhs or, after tax return should be more than or at least equal to the weighted average cost of capital.

3. Value of a company (V) = Value of equity (S) + Value of debt (D)

$$₹\ 25,00,000 = \frac{\text{Net Income (NI)}}{K_e} + ₹\ 5,00,000$$

Or, Net Income (NI) = 0.21 (₹ 25,00,000 – ₹ 5,00,000)

Market Value of Equity = ₹ 25,00,000

K_e =21%

$$\frac{\text{Net income (NI) for equity holders}}{K_e} = \text{Market Value of Equity}$$

$$\frac{\text{Net income (NI) for equity holders}}{0.21} = ₹\ 25,00,000$$

Net income for equity holders = ₹ 5,25,000

EBIT = 5,25,000/0.7 = ₹ 7,50,000

	All Equity	Debt and Equity
	₹	₹
EBIT	7,50,000	7,50,000
Interest to debt-holders	-	(75,000)
EBT	7,50,000	6,75,000
Taxes (30%)	(2,25,000)	(2,02,500)
Income available to equity shareholders	5,25,000	4,72,500
Income to debt holders plus income available to shareholders	5,25,000	5,47,500

Present value of tax-shield benefits = ₹ 5,00,000 × 0.30 = ₹ 1,50,000

(i) Value of Restructured firm

= ₹ 25,00,000 + ₹ 1,50,000 = ₹ 26,50,000

(ii) Cost of Equity (K_e)

Total Value = ₹26,50,000

Less: Value of Debt = ₹5,00,000

Value of Equity = ₹21,50,000

$K_e = \frac{4,72,500}{21,50,000} = 0.219 = 21.98\%$

(iii) WACC (on market value weight)

Cost of Debt (after tax) = 15% (1- 0.3) = 0.15 (0.70) = 0.105 = 10.5%

Components of Costs	Amount (₹)	Cost of Capital (%)	Weight	WACC (%)
Equity	21,50,000	21.98	0.81	17.80
Debt	5,00,000	10.50	0.19	2.00
	26,50,000			19.80

Comment: At present the company is all equity financed. So, $K_e = K_o$ i.e. 21%. However, after restructuring, the K_o would be reduced to 19.80% and K_e would increase from 21% to 21.98%.

4. Income Statement

Particulars	Amount (₹)
Sales	75,00,000
Less: Variable cost (56% of 75,00,000)	(42,00,000)
Contribution	33,00,000
Less: Fixed costs	(6,00,000)

Earnings before interest and tax (EBIT)	27,00,000
Less: Interest on debt (@ 9% on ₹ 45 lakhs)	(4,05,000)
Earnings before tax (EBT)	22,95,000

(i) $ROI = \frac{EBIT}{Capital\ employed} \times 100 = \frac{EBIT}{Equity + Debt} \times 100$

$= \frac{27,00,000}{55,00,000 + 45,00,000} \times 100 = 27\%$

(ROI is calculated on Capital Employed)

(ii) ROI = 27% and Interest on debt is 9%, hence, it has a favourable financial leverage.

(iii) $Capital\ Turnover = \frac{Net\ Sales}{Capital}$

$Or = \frac{Net\ Sales}{Capital} = \frac{₹\ 75,00,000}{₹\ 1,00,00,000} = 0.75$

Which is very low as compared to industry average of 3.

(iv) Calculation of Operating, Financial and Combined leverages

(a) $Operating\ Leverage = \frac{Contribution}{EBIT} = \frac{₹\ 33,00,000}{₹\ 27,00,000} = 1.22$ (approx)

(b) $Financial\ Leverage = \frac{EBIT}{EBT} = \frac{₹\ 27,00,000}{₹\ 22,95,000} = 1.18$ (approx)

(c) $Combined\ Leverage = \frac{Contribution}{EBT} = \frac{₹\ 33,00,000}{₹\ 22,95,000} = 1.44$ (approx)

Or = Operating Leverage × Financial Leverage = 1.22 × 1.18 = 1.44 (approx)

(v) Operating leverage is 1.22. So if sales is increased by 10%. EBIT will be increased by 1.22 × 10 i.e. 12.20% (approx)

(vi) Since the combined Leverage is 1.44, sales have to drop by 100/1.44 i.e. 69.44% to bring EBT to Zero

Accordingly, New Sales = ₹ 75,00,000 × (1-0.6944)

= ₹ 75,00,000 × 0.3056

= ₹ 22,92,000 (approx)

Hence at ₹22,92,000 sales level EBT of the firm will be equal to Zero.

(vii) Financial leverage is 1.18. So, if EBIT increases by 20% then EBT will increase by 1.18 × 20 = 23.6% (approx)

5. (i) Net Cash Outlay of New Machine

Purchase Price	₹ 60,00,000
Less: Exchange value of old machine	
[2,50,000 – 0.4(2,50,000 – 0)]	1,50,000
	₹ 58,50,000

Market Value of Old Machine: The old machine could be sold for ₹ 1,50,000 in the market. Since the exchange value is more than the market value, this option is not attractive. This opportunity will be lost whether the old machine is retained or replaced. Thus, on incremental basis, it has no impact.

Depreciation base: Old machine has been fully depreciated for tax purpose.

Thus, the depreciation base of the new machine will be its original cost i.e. ₹ 60,00,000.

Net Cash Flows: Unit cost includes depreciation and allocated overheads. Allocated overheads are allocated from corporate office therefore they are irrelevant. The depreciation tax shield may be computed separately. Excluding depreciation and allocated overheads, unit costs can be calculated. The company will obtain additional revenue from additional 20,000 units sold.

Thus, after-tax saving, excluding depreciation, tax shield, would be

= {100,000(200 – 148) – 80,000(200 – 173)} × (1 – 0.40)

= {52,00,000 – 21,60,000} × 0.60

= ₹ 18,24,000

After adjusting depreciation tax shield and salvage value, net cash flows and net present value are estimated.

Calculation of Cash flows and Project Profitability

							₹ ('000)
		0	1	2	3	4	5
1	After-tax savings	-	1824	1824	1824	1824	1824
2	Depreciation (₹ 60,00,000 – 2,50,000)/5	-	1150	1150	1150	1150	1150
3	Tax shield on depreciation (Depreciation × Tax rate)	-	460	460	460	460	460

4	Net cash flows from operations (1 + 3)*	-	2284	2284	2284	2284	2284
5	Initial cost	(5850)					
6	Net Salvage Value (2,50,000 – 35,000)	-	-	-	-	-	215
7	Net Cash Flows (4+5+6)	(5850)	2284	2284	2284	2284	2499
8	PVF at 15%	1.00	0.8696	0.7561	0.6575	0.5718	0.4972
9	PV	(5850)	1986.166	1726.932	1501.73	1305.99	1242.50
10	NPV	₹ 1913.32					

* Alternately Net Cash flows from operation can be calculated as follows:

Profit before depreciation and tax = ₹ 1,00,000 (200 -148) - 80,000 (200 -173)

= ₹ 52,00,000 – 21,60,000

= ₹ 30,40,000

So profit after depreciation and tax is ₹ (30,40,000 -11,50,000) × (1 - .40)

= ₹ 11,34,000

So profit before depreciation and after tax is :

₹ 11,34,000 + ₹ 11,50,000 (Depreciation added back) = ₹ 22,84,000

(ii)

						₹ ('000)
	0	**1**	**2**	**3**	**4**	**5**
NCF	(5850)	2284	2284	2284	2284	2499
PVF at 20%	1.00	0.8333	0.6944	0.5787	0.4823	0.4019
PV	(5850)	1903.257	1586.01	1321.751	1101.57	1004.35
PV of benefits	6916.94					
PVF at 30%	1.00	0.7692	0.5917	0.4550	0.3501	0.2693
PV	(5850)	1756.85	1351.44	1039.22	799.63	672.98
PV of benefits	5620.12					

$$\text{IRR} = 20\% + 10\% \times \frac{1066.94}{1296.82} = 28.23\%$$

(iii) Advise: The Company should go ahead with replacement project, since it is positive NPV decision.

6. (a) In case of customer A, there is no increase in sales even if the credit is given. Hence comparative statement for B & C is given below:

Particulars	Customer B				Customer C			
1. Credit period (days)	0	30	60	90	0	30	60	90
2. Sales Units	1,000	1,500	2,000	2,500	-	-	1,000	1,500
	₹ in lakhs				₹in lakhs			
3. Sales Value	90	135	180	225	-	-	90	135
4. Contribution at 20% (A)	18	27	36	45	-	-	18	27
5. Receivables: $\frac{\text{Credit Period} \times \text{Sales}}{360}$	-	11.25	30	56.25	-	-	15	33.75
6. Debtors at cost i.e. 80% of 11.25	-	9	24	45	-	-	12	27
7. Cost of carrying debtors at 20% (B)	-	1.8	4.8	9	-	-	2.4	5.4
8. Excess of contributions over cost of carrying debtors (A – B)	18	25.2	31.2	36	-	-	15.6	21.6

The excess of contribution over cost of carrying Debtors is highest in case of credit period of 90 days in respect of both the customers B and C. Hence, credit period of 90 days should be allowed to B and C.

(b) Problem:

(i) Customer A is taking 1000 TV sets whether credit is given or not. Customer C is taking 1000 TV sets at credit for 60 days. Hence A also may demand credit for 60 days compulsorily.

(ii) B will take 2500 TV sets at credit for 90 days whereas C would lift 1500 sets only. In such case B will demand further relaxation in credit period i.e. B may ask for 120 days credit.

7. (i) Statement showing Working Capital for each policy

(₹ in crores)

	Working Capital Policy		
	Conservative	Moderate	Aggressive
Current Assets: (i)	4.50	3.90	2.60
Fixed Assets: (ii)	2.60	2.60	2.60

Total Assets: (iii)	7.10	6.50	5.20
Current liabilities: (iv)	2.34	2.34	2.34
Net Worth: (v)=(iii)-(iv)	4.76	4.16	2.86
Total liabilities: (iv)+(v)	7.10	6.50	5.20
Estimated Sales: (vi)	12.30	11.50	10.00
EBIT: (vii)	1.23	1.15	1.00
(a) Net working capital position: (i)-(iv)	2.16	1.56	0.26
(b) Rate of return: (vii)/(iii)	17.3%	17.7%	19.2%
(c) Current ratio: (i)/(iv)	1.92	1.67	1.11

(ii) Statement Showing Effect of Alternative Financing Policy

(₹ in crores)

Financing Policy	Conservative	Moderate	Aggressive
Current Assets: (i)	3.90	3.90	3.90
Fixed Assets: (ii)	2.60	2.60	2.60
Total Assets: (iii)	6.50	6.50	6.50
Current Liabilities: (iv)	2.34	2.34	2.34
Short term Debt: (v)	0.54	1.00	1.50
Long term Debt: (vi)	1.12	0.66	0.16
Equity Capital (vii)	2.50	2.50	2.50
Total liabilities	6.50	6.50	6.50
Forecasted Sales	11.50	11.50	11.50
EBIT: (viii)	1.15	1.15	1.15
Less: Interest short-term debt: (ix)	0.06 (12% of ₹ 0.54)	0.12 (12% of ₹ 1.00)	0.18 (12% of ₹ 1.50)
Long term debt: (x)	0.18 (16% of ₹ 1.12)	0.11 (16% of ₹ 0.66)	0.03 (16% of ₹ 0.16)
Earning before tax: (xi) - (ix + x)	0.91	0.92	0.94
Tax @ 35%	(0.32)	(0.32)	(0.33)
Earning after tax: (xii)	0.59	0.60	0.61
(a) Net Working Capital Position: (i) - [(iv)+(v)]	1.02	0.56	0.06
(b) Rate of return on Equity shareholders' capital : (xii)/(vii)	23.6%	24%	24.4%
(c) Current Ratio: [(i)/(iv)+(v)]	1.35	1.17	1.02

8. Determination of Net Present Value (NPV)

Year	Expected Cash flow (₹)	Certainty-equivalent (CE)	Adjusted Cash flow (Cash flow × CE) (₹)	PV factor (at 0.06)	Total PV (₹)
0	(4,00,000)	1.0	(4,00,000)	1.000	(4,00,000)
1	3,20,000	0.8	2,56,000	0.943	2,41,408
2	2,80,000	0.7	1,96,000	0.890	1,74,440
3	2,60,000	0.6	1,56,000	0.840	1,31,040
4	2,40,000	0.4	96,000	0.792	76,032
5	1,60,000	0.3	48,000	0.747	35,856
	NPV = (6,58,776 – 4,00,000)				2,58,776

As the Net Present Value is positive the project should be accepted.

9. Option A

The loan amount is repayable together with the interest at the rate of 14% on loan amount and is repayable in equal instalments at the end of each year. The PVAF at the rate of 14% for 5 years is 3.432, the amount payable will be

$$\text{Annual Payment} = \frac{₹50,00,000}{3.432} = ₹14,56,876$$

Schedule of Debt Repayment

End of year	Total Payment (₹)	Interest (₹)	Principal (₹)	Principal amount outstanding (₹)
1	14,56,876	7,00,000	7,56,876	42,43,124
2	14,56,876	5,94,037	8,62,839	33,80,285
3	14,56,876	4,73,240	9,83,636	23,96,649
4	14,56,876	3,35,531	11,21,345	12,75,304
5	14,56,876	1,81,572*	12,75,304	0

*Balancing Figure

Schedule of Cash Outflows: Debt Alternative **(Amount in ₹)**

End of year	Debt Payment	Interest	Depreciat-ion	Total	Tax Shield	Cash Outflows	PV factor @12%	Present Value
1	14,56,876	7,00,000	7,50,000	14,50,000	5,07,500	9,49,376	0.893	8,47,793
2	14,56,876	5,94,037	6,37,500	12,31,537	4,31,038	10,25,838	0.797	8,17,593
3	14,56,876	4,73,240	5,41,875	10,15,115	3,55,290	11,01,586	0.712	7,84,329

4	14,56,876	3,35,531	4,60,594	7,96,125	2,78,644	11,78,232	0.636	7,49,356
5	14,56,876	1,81,572	3,91,505	5,73,077	2,00,577	12,56,299	0.567	7,12,322
								39,11,393
Less: PV of Salvage Value								(12,57,904)
								26,53,489

Total present value of Outflows = ₹ 26,53,489

Option B

Lease Rent ₹16,50,000

Tax Shield (5,77,500)

Outflow 10,72,500 × 3.605 = ₹38,66,363

Since PV of outflows is lower in the Borrowing option, XYZ Ltd. should avail of the loan and purchase the equipment.

10. Market Price (P) per share as per Walter's Model is:

$$P = \frac{D+\frac{r}{K_e}(E-D)}{K_e}$$

Where,

P = Price of Share

r = Return on investment or rate of earning

K_e = Rate of Capitalisation or Cost of Equity

Calculation of Market Price (P) under the following dividend payout ratio and earning rates:

		(i)	(ii)	(iii)
	Rate of Earning (r)	**DP ratio 50%**	**DP ratio 75%**	**DP ratio 100%**
(a)	15%	$\frac{5+\left(\frac{0.15}{0.10}\right)(10-5)}{0.10}$ $=\frac{12.5}{0.10}=₹125$	$\frac{7.5+\left(\frac{0.15}{0.10}\right)(10-7.5)}{0.10}$ $=\frac{11.25}{0.10}=₹112.5$	$\frac{10+\left(\frac{0.15}{0.10}\right)(10-10)}{0.10}$ $=\frac{10}{0.10}=₹100$

(b)	10%	$\frac{5+\left(\frac{0.10}{0.10}\right)(10-5)}{0.10}$ $=\frac{10}{0.10}=₹100$	$\frac{7.5+\left(\frac{0.10}{0.10}\right)(10-7.5)}{0.10}$ $=\frac{10}{0.10}=₹100$	$\frac{10+\left(\frac{0.10}{0.10}\right)(10-10)}{0.10}$ $=\frac{10}{0.10}=₹100$
(c)	5%	$\frac{5+\left(\frac{0.05}{0.10}\right)(10-5)}{0.10}$ $=\frac{7.5}{0.10}=₹75$	$\frac{7.5+\left(\frac{0.05}{0.10}\right)(10-7.5)}{0.10}$ $=\frac{8.75}{0.10}=₹87.5$	$\frac{10+\left(\frac{0.05}{0.10}\right)(10-10)}{0.10}$ $=\frac{10}{0.10}=₹100$

11. (i) The profit maximisation is not an operationally feasible criterion." This statement is true because profit maximisation can be a short-term objective for any organisation and cannot be its sole objective. Profit maximization fails to serve as an operational criterion for maximizing the owner's economic welfare. It fails to provide an operationally feasible measure for ranking alternative courses of action in terms of their economic efficiency. It suffers from the following limitations:

(i) Vague term: The definition of the term profit is ambiguous. Does it mean short term or long term profit? Does it refer to profit before or after tax? Total profit or profit per share?

(ii) Timing of Return: The profit maximization objective does not make distinction between returns received in different time periods. It gives no consideration to the time value of money, and values benefits received today and benefits received after a period as the same.

(iii) It ignores the risk factor.

(iv) The term maximization is also vague.

(ii) Difference between Financial Lease and Operating Lease

	Financial Lease	Operating Lease
1.	The risk and reward incident to ownership are passed on to the lessee. The lessor only remains the legal owner of the asset.	The lessee is only provided the use of the asset for a certain time. Risk incident to ownership belong wholly to the lessor.
2.	The lessee bears the risk of obsolescence.	The lessor bears the risk of obsolescence.

3.	The lessor is interested in his rentals and not in the asset. He must get his principal back along with interest. Therefore, the lease is non-cancellable by either party.	As the lessor does not have difficulty in leasing the same asset to other willing lessor, the lease is kept cancelable by the lessor.
4.	The lessor enters into the transaction only as financier. He does not bear the cost of repairs, maintenance or operations.	Usually, the lessor bears cost of repairs, maintenance or operations.
5.	The lease is usually full payout, that is, the single lease repays the cost of the asset together with the interest.	The lease is usually non-payout, since the lessor expects to lease the same asset over and over again to several users.

SECTION: B: ECONOMICS FOR FINANCE

QUESTIONS

1. (a) How does Personal Income differ from Disposable Personal Income?

   (b) Calculate Gross National Disposable income from the following data (in ₹ Crores)

NDP at factor cost	6000
Net factor income to abroad	- 300
Consumption of fixed capital	400
Current transfers from government	200
Net current transfers from rest of the world	500
Indirect taxes	700
Subsidies	600

2 (a) What would happen if aggregate expenditures were to exceed the country's economy's production capacity?

   (b) What effects do income leakages have on multiplier?

   (c) An Economy is characterised by the following equations:

   Consumption (C) = 100+0.9 Yd

   Investment (I) = 100

   Government Expenditure (G) = 120

   Tax (T) = 50

   X (Exports) = 200

   M (Imports) = 100+ 0.15 Y

   (i) What is the equilibrium Income?

   (ii) Calculate trade balance.

   (iii) What is the value of Foreign Trade Multiplier?

3. (a) What should be the public revenue and expenditure policy during recession?

   (b) Explain the different types of externalities? How do externalities lead to welfare loss of markets?

   (c) Describe price ceilings with examples.

4. Fiscal policy plays a significant role in reducing inequality and achieving equity and social justice. Do you agree? Substantiate your answer with examples.

5. (a) Explain how 'technical barriers to trade' (TBT) may operate as a protectionist measure?

(b) Distinguish between 'pump priming' and 'compensatory spending'?

6. (a) Critically examine the post Keynesian theories of demand for money?

(b) (i) In Keynesian analysis of speculative demand for money, how will demand for money be affected if people feel that the level of interest is very high? What is the rationale behind their choice?

(ii) Do you think money is a unique store of value?

7. (a) Explain how each of the following may affect money multiplier and money supply?

(i) Fearing shortage of money in ATM's, people decide to hoard money?

(ii) During festival season, people decide to withdraw money through ATMs very often

(b) Explain the money multiplier approach to money supply.

(c) Explain the function of SLR? What are the eligible securities of SLR?

8. (a) Enumerate the bases of distinction between FDI and FPI

(b) What is meant by 'monetary policy instruments'?

9. Distinguish between 'non tariff measures' and 'non tariff barriers'

10. (a) How does the WTO address the special needs of developing and the least developed countries?

(b) What's meant by free trade area?

(c) What are the objectives of the Agreement on Agriculture (AOA)?

(d) Explain the effect of currency devaluation? Do you think a weak currency is advantageous to a country?

SUGGESTED ANSWERS/HINTS

1. (a) Personal income is a measure of actual current income receipts of persons from all sources which may or may not be earned from productive activities during a given period of time. In other words, it is the income 'actually paid out' to the household sector, but not necessarily earned.

Disposable personal income is a measure of amount of the money in the hands of the individuals that is available for their consumption or savings. Disposable personal income is derived from personal income by subtracting the direct taxes paid by individuals and other compulsory payments made to the government.

DI = PI - Personal Income Taxes

(b) Gross National Disposable Income (GNDI)= GNP_{MP} + Net current transfer received from rest of the world. Net current transfer received from rest of the world is the difference between the current transfer received from rest of the world and current transfers paid to rest of the world. Current transfers from government are not included as they are simply transfers within the economy.

Gross National Disposable Income = (National Consumption Expenditure) + (Gross National Saving)

= (Government final consumption expenditure+ Private final consumption expenditure) + (Gross National Saving.)

Calculation: -

= NDP at factor cost + Consumption of fixed capital =GDP at factor cost

GDP at factor cost + Net factor income to abroad = GNP at factor cost

GNP at factor cost + (indirect taxes – subsidies) = GNP at market prices

GNP at market prices + Net current transfers from rest of the world

= Gross National Disposable income

= (6000+400) + (- 300) + (700-600) + 500

= 6400 - 300 + 100 + 500 = **6700 Crores**

2. (a) Aggregate demand (AD) is the sum of all planned expenditures for the entire economy. When aggregate expenditures exceed an economy's production capacity at full employment level; the resulting strain on resources creates "demand-pull" inflation or higher price level. Nominal output will increase, but it merely reflects higher prices, rather than additional real output.

(b) The multiplier is the ratio of the change in real GDP to the initial change in spending. Causes responsible for the decline in income are called leakages. Income that is not spent on currently produced consumption goods and services may be regarded as having leaked out of income stream. If the increased income goes out of the cycle of consumption expenditure, there is a leakage from income stream which reduces the effect of multiplier. The more powerful these leakages are, the smaller will be the value of multiplier.

(c) (i) National Income

Y = C+I+G+(X-M)

= $(100+0.9Y_d)$ +100+120+200-(100+0.15Y)

= 100+0.9(Y-T) +100+120+200-100-0.15Y

= 100+0.9(Y-50) +100+120+200-100-0.15Y

Y= 375+0.75Y

Y-0.75Y= 375

0.25Y= 375

Y= $375 \times \frac{100}{25} = 1500.00$

(ii) Trade balance = X- M

= 200- (100+0.15Y)

Substituting the value of Y We have

Trade Balance = 200-100-225= -125

Trade balance is in deficit of 125.

(iii) Value of foreign trade Multiplier = $\frac{1}{1-b+m}$

Where b marginal propensity to consume, and m is marginal propensity to import. (Here MPC = 0.9 and marginal propensity to Import (m) = 0.15

Foreign trade Multiplier = $\frac{1}{1-0.9+0.15} = \frac{1}{1.15-0.9} = \frac{1}{0.25} = \frac{100}{25} = 4$

3. (a) Government's fiscal policy for stabilization purposes attempts to direct the actions of individuals and organizations by means of its expenditure and taxation decisions. During recession, an expansionary fiscal policy is resorted to by government through increased aggregate spending to compensate for the deficiency in effective demand. Increased government expenditure (for example on building infrastructure) injects more money into the economy, initiate a series of productive activities, stimulates overall economic activities, employment and demand.

Production decisions, investments, savings etc can be influenced by government's tax policies. During recession, the government's tax policy is framed to encourage private consumption and investment. A general reduction in income taxes leaves higher disposable incomes with people inducing higher consumption. Low corporate taxes increase the prospects of profits for business and promote further investment.

(b) Externalities, also referred to as 'spillover effects', 'neighbourhood effects' 'third-party effects' or 'side-effects', occur when the actions of either consumers or producers result in costs or benefits that do not reflect as part of the market price. Externalities cause market inefficiencies because they hinder the ability of market prices to convey accurate information about how much to produce and how much to buy. Since externalities are not reflected in market prices, they can be a source of economic inefficiency. Externalities are initiated and experienced, not through the operation of the price system, but outside the market and therefore are external to the market. Externalities may be positive or negative or may be unidirectional or reciprocal.

Negative externalities occur when the action of one party imposes costs on another party. Positive externalities occur when the action of one party confers benefits on another party. The four possible types of externalities are

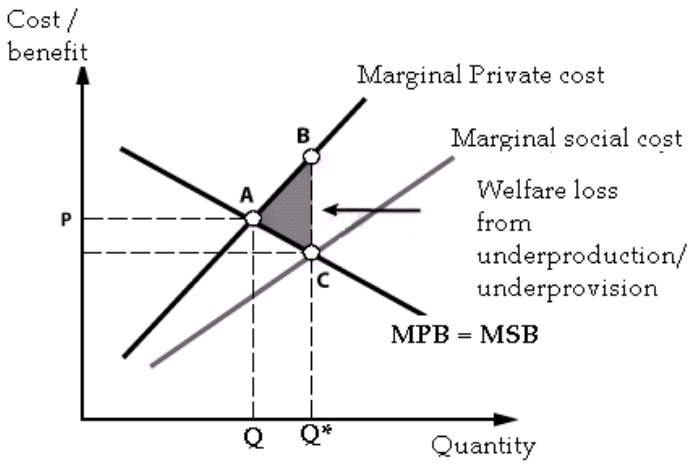
(i) negative externality initiated in production which imposes an external cost on others,

(ii) positive production externality, less commonly seen, initiated in production that confers external benefits on others,

(iii) negative consumption externalities initiated in consumption which produce external costs on others,

(iv) positive consumption externality initiated in consumption that confers external benefits on others. Each of the above may be received by another in consumption or in production. The firm or the consumer as the case may be, however, has no incentive to account for the external costs that it imposes on consumers.

How negative externalities lead to welfare loss of markets may be explained with the help of the following diagram



The equilibrium level of output that would be produced by a free market is Q1 at which marginal private benefit (MPB) is equal to marginal private cost (MPC). Marginal social cost (MSC) represents the full or true cost to the society of producing another unit of a good. It includes marginal private cost (MPC) and marginal social cost (MSC). Assuming that there are no externalities arising from consumption, we can see that marginal social cost (Q1S) is higher than marginal private cost (Q1E). Social efficiency occurs at Q2 level of output where marginal social cost is equal to marginal social benefit. Output Q1 is socially inefficient because at Q1, the marginal social cost

is greater than the marginal social benefit and represents over production. The shaded triangle represents the area of dead weight welfare loss. It indicates the area of overconsumption. Thus, we conclude that when there is negative externality, a competitive market will produce too much output relative to the social optimum. This is a clear case of market failure where prices fail to provide the correct signals.

When there is a positive externality, the actual output is lower than the optimal one at which marginal social (MSC) cost is equal to marginal social benefit (MSB). There is a welfare loss to the society due to under production and under consumption. This is a strong case for government intervention in the case of such goods.

(c) Price ceiling is a government intervention in regulated market economies wherein an upper limit is set on the price charged for a product or service and the sellers are bound to abide by such limits. The objective is to influence the outcomes of a market on grounds of fairness and equity. When prices of certain essential commodities rise excessively, government may resort to controls in the form of price ceilings (also called maximum price) for making a resource or commodity available to all at reasonable prices. Rent controls, setting of maximum prices of food grains and essential items during times of scarcity etc are examples of price ceiling. A price ceiling which is set below the prevailing market clearing price will generate excess demand over supply and shortages will result.

4. Many developed and developing economies are facing the challenge of rising inequality in incomes and opportunities. Fiscal policy is a chief instrument available to governments to influence income distribution and plays a significant role in reducing inequality and achieving equity and social justice. The distribution of income in the society is influenced by fiscal policy both directly and indirectly. While current disposable incomes of individuals and corporates are dependent on direct taxes, the potential for future earnings is indirectly influenced by the nation's fiscal policy choices.

Government revenues and expenditure have traditionally been regarded as important instruments for carrying out desired redistribution of income. A progressive direct tax system ensures that those who have greater ability to pay contribute more towards defraying the expenses of government and that the tax burden is distributed fairly among the population.

- Indirect taxes can be differential: for example, the commodities which are primarily consumed by the richer income group, such as luxuries, are taxed heavily and the commodities the expenditure on which form a larger proportion of the income of the lower income group, such as necessities, are taxed light.
- A carefully planned policy of public expenditure helps in redistributing income from the rich to the poorer sections of the society. This is done through spending programmes targeted on welfare measures for the disadvantaged, such as

  (i) poverty alleviation programmes

(ii) free or subsidized medical care, education, housing, essential commodities etc. to improve the quality of living of poor

(iii) infrastructure provision on a selective basis

(iv) various social security schemes under which people are entitled to old-age pensions, unemployment relief, sickness allowance etc.

(v) subsidized production of products of mass consumption

(vi) public production and/ or grant of subsidies to ensure sufficient supply of essential goods, and

(vii) strengthening of human capital for enhancing employability etc.

Choice of a progressive tax system with high marginal taxes may act as a strong deterrent to work save and invest. Therefore, the tax structure has to be carefully framed to mitigate possible adverse impacts on production and efficiency. Additionally, the redistributive fiscal policy and the extent of spending on redistribution should be consistent with the macroeconomic policy objectives of the nation.

5. (a) The non tariff measure 'technical barriers to trade' (TBT) which cover both food and non-food traded products refers to mandatory standards and technical regulations that define specific characteristics that a product should have, such as its size, shape, design, labelling/marking/packaging, production methods, functionality or performance. The specific procedures used to check whether a product is really conforming to these requirements (conformity assessment procedures e.g. testing, inspection and certification) are also covered in TBT. This involves compulsory quality, quantity and price control of goods before shipment from the exporting country. TBT measures are standards-based measures that countries use to protect their consumers and preserve natural resources, but these can also be used effectively as obstacles to imports or to discriminate against imports and protect domestic products. In actual practice, technical measures create trade barriers for existing and potential exporters for the following reasons:

(a) Altering products and production processes to comply with the diverse requirements in export markets may be either impossible for the exporting country or would obviously raise costs hurting the competitiveness of the exporting country.

(b) Compliance with technical regulations needs to be established through testing, certification or inspection by laboratories or certification bodies. These are usually cumbersome and costly

(c) The exporters also need to incur additional costs for consultation, acquisition of expertise, training etc.

In effect technical measures, or the ways in which they are applied, discriminate against foreign producers and turn out to be trade restrictive rather than being

legitimate implementation of social policy. Some examples of TBT are: food laws, quality standards, industrial standards, organic certification, eco-labelling, ingredient standards, shelf-life restrictions, marketing and labelling requirements.

(b) A distinction is made between the two concepts of public spending during depression, namely, the concept of 'pump priming' and the concept of 'compensatory spending'. Pump priming involves a one-shot injection of government expenditure into a depressed economy with the aim of boosting business confidence and encouraging larger private investment. It is a temporary fiscal stimulus in order to set off the multiplier process. The argument is that with a temporary injection of purchasing power into the economy through a rise in government spending financed by borrowing rather than taxes, it is possible for government to bring about permanent recovery from a slump. Pumppriming was widely used by governments in the post-war era in order to maintain full employment; however, it became discredited later when it failed to halt rising unemployment and was held responsible for inflation. Compensatory spending is said to be resorted to when the government spending is deliberately carried out with the obvious intention to compensate for the deficiency in private investment.

6. (a) The post-Keynesian economists developed a number of models to provide alternative explanations to confirm the formulation relating real money balances with real income and interest rates. Most post-Keynesian theories of demand for money emphasize the store-of-value or the asset function of money.

Inventory Approach to Transaction Balances

Baumol (1952) and Tobin (1956) developed a deterministic theory of transaction demand for money, known as Inventory Theoretic Approach, in which money or 'real cash balance' was essentially viewed as an inventory held for transaction purposes. People hold an optimum combination of bonds and cash balance, i.e., an amount that minimizes the opportunity cost. The optimal average money holding is: a positive function of income Y, a positive function of the price level P, a positive function of transactions costs c, and a negative function of the nominal interest rate i.

Friedman's Restatement of the Quantity Theory

Milton Friedman (1956) extending Keynes' speculative money demand within the framework of asset price theory holds that demand for money is affected by the same factors as demand for any other asset, namely, permanent income and relative returns on assets. The nominal demand for money is positively related to the price level, P; rises if bonds and stock returns, r_b and r_e, respectively decline and vice versa; is influenced by inflation; and is a function of total wealth. The Demand for Money as Behaviour toward as 'aversion to risk' propounded by Tobin states that money is a safe asset but an investor will be willing to exercise a trade-off and sacrifice to some extent the higher return from bonds for a reduction in risk.

The Demand for Money as Behaviour towards Risk

According to Tobin, rational behaviour explained induces individuals to hold an optimally structured wealth portfolio which is comprised of both bonds and money and the demand for money as a store of wealth depends negatively on the interest rate.

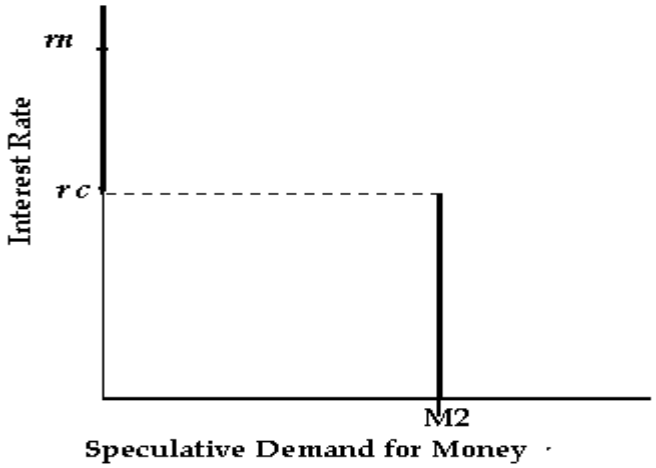
These theories establish a positive relation of demand for money to real income and an inverse relation to the rate of return on earning assets, i.e. the interest rate.

(b) (i) If wealth-holders consider that the current rate of interest is high compared to the 'normal or critical rate of interest', they expect a fall in the interest rate (rise in bond prices). At the high current rate of interest, people are discouraged from holding money and hence they will convert their cash balances into bonds because there is high opportunity cost of holding cash in terms of interest forgone; as they can earn high rate of return on bonds. Also, there is less chance of interest rates to rise further resulting in a fall in prices of bonds and consequent capital losses. They expect fall in the market rate of interest in future and capital gains resulting from a rise in bond prices. Anticipating such capital gains from rising bond prices, people will convert their cash into bonds.

The inference from the above is that the speculative demand for money and interest are inversely related. **At higher rates of interest, the speculative demand for money would be less. The individual would then hold as little money as possible, only for covering the transactions and precautionary motives**

The individual's demand for money, as a function of the interest rate, would then be a step function, depicting a discontinuous portfolio decision as **shown in figure below;**

Individual's Speculative Demand for Money



When the current rate of interest r n is higher than the critical rate of interest rc, the entire wealth is held by the individual wealth-holder in the form of bonds. If the rate of interest falls below the critical rate of interest rc, the individual will hold his entire wealth in the form of speculative cash balances.

(ii) The effectiveness of an asset as a store of value depends on the degree and certainty with which the asset maintains its value over time. Money is undeniably a good store of value; but it is not unique as a store of value. Financial assets other than money are also performing the function of store of value just as money has the financial assets have fixed nominal value over time and represent generalised purchasing power. Any asset, such as equities, bonds, land, buildings, precious metals, antiques and works of art can all act as store of value.

7. (a) (i) The money multiplier is a function of the currency ratio set by depositors ***c***, which depends on the behaviour of the public in respect of holding money. The public by their decisions in respect of the size of the nominal currency in hand (designated as the currency ratio) is in a position to influence the amount of the nominal demand deposits of the commercial banks. When people decide to hoard to money fearing shortage of money in ATM's, there is an increase in ***c*** because depositors are converting some of their demand deposits into currency. Demand deposits undergo multiple expansions while currency does not. Hence when demand deposits are being converted into currency, there is a switch from a component of the money supply that undergoes multiple expansions to one that does not. The overall level of multiple expansion declines, and therefore, money multiplier also falls.

(ii) Demand deposits held by people are highly liquid as they can be easily withdrawn and converted to cash. If people, for any reason, withdraw money from ATMs with greater frequency, then banks will have to keep more cash reserves to meet the obligations. This will raise the reserve ratio, and lower the money multiplier. As a result money supply will decline.

(b) The money multiplier approach to money supply propounded by Milton Friedman and Anna Schwartz, (1963) considers three factors as immediate determinants of money supply, namely:

(a) the stock of high-powered money (H)

(b) the ratio of deposit to reserve, $e = \{ER/D\}$ and

(c) the ratio of deposit to currency, $c = \{C/D\}$

These three represent the behaviour of the central bank, behaviour of the commercial banks and the behaviour of the general public respectively.

(a) The Behaviour of the Central Bank: The behaviour of the central bank which

controls the issue of currency is reflected in the supply of the nominal high-powered money. Money stock is determined by the money multiplier and the monetary base is controlled by the monetary authority. Given the behaviour of the public and the commercial banks, the total supply of nominal money in the economy will vary directly with the supply of the nominal high-powered money issued by the central bank.

(b) The Behaviour of Commercial Banks: By creating credit, the commercial banks determine the total amount of nominal demand deposits. The behaviour of the commercial banks in the economy is reflected in the ratio of their cash reserves to deposits known as the 'reserve ratio'. If the required reserve ratio on demand deposits increases while all the other variables remain the same, more reserves would be needed. This implies that banks must contract their loans, causing a decline in deposits and hence in the money supply. If the required reserve ratio falls, there will be greater multiple expansions of demand deposits because the same level of reserves can now support more demand deposits and the money supply will increase. The additional units of high-powered money that goes into 'excess reserves' of the commercial banks do not lead to any additional loans, and therefore, these excess reserves do not lead to the creation of deposits. When the required reserve ratio falls, there will be greater multiple expansions for demand deposits. Excess reserves ratio *e* is negatively related to the market interest rate ***i***. If interest rate increases, the opportunity cost of holding excess reserves rises, and the desired ratio of excess reserves to deposits falls.

(c) The Behaviour of the Public: The public, by their decisions in respect of the amount of nominal currency in hand (how much money they wish to hold as cash) is in a position to influence the amount of the nominal demand deposits of the commercial banks. The behaviour of the public influences bank credit through the decision on ratio of currency to the money supply designated as the 'currency ratio'.

The time deposit-demand deposit ratio i.e. how much money is kept as time deposits compared to demand deposits, also has an important implication for the money multiplier and hence for the money stock in the economy. An increase in TD/DD ratio means that greater availability of free reserves and consequent enlargement of volume of multiple deposit expansion and monetary expansion.

Thus the money multiplier approach, the size of the money multiplier is determined by the required reserve ratio (r) at the central bank, the excess reserve ratio (e) of commercial banks and the currency ratio (c) of the public. The lower these ratios are, the larger the money multiplier is. In other words, the money supply is determined by high powered money (H) and the money multiplier (m) and varies directly with changes in the monetary base, and inversely with the currency and reserve ratios. Although these three variables do not completely explain changes in the nominal money supply, nevertheless

they serve as useful devices for analysing such changes. Consequently, these variables are designated as the 'proximate determinants' of the nominal money supply in the economy.

(c) The Statutory Liquidity ratio (SLR) is an instrument of monetary policy and aims to control liquidity in the domestic market by means of manipulating bank credit. Changes in the SLR chiefly influence the availability of resources in the banking system for lending. A rise in the SLR which is resorted to during periods of high liquidity, tends to lock up a rising fraction of a bank's assets in the form of eligible instruments, and this reduces the credit creation capacity of banks. A reduction in the SLR during periods of economic downturn has the opposite effect. The SLR requirement also facilitates a captive market for government securities.

Following are the eligible securities of SLR;

(i) Cash

(ii) Gold valued at a price not exceeding the current market price,

or

(iii) Investments in un-encumbered Instruments that include:

(a) Treasury-bills of the Government of India.

(b) Dated securities including those issued by the Government of India from time to time under the market borrowings programme and the Market Stabilization Scheme (MSS).

(c) State Development Loans (SDLs) issued by State Governments under their market borrowings programme.

(d) Other instruments as notified by the RBI.

8. (a) Foreign direct investment takes place when the resident of one country (i.e. home country) acquires ownership of an asset in another country (i.e. the host country) and such movement of capital involves ownership, control as well as management of the asset in the host country. Foreign portfolio investment is the flow of what economists call 'financial capital' rather than 'real capital' and does not involve ownership or control on the part of the investor.

Foreign direct investment (FDI) VS Foreign portfolio investment (FPI)

Foreign direct investment (FDI)	Foreign portfolio investment (FPI)
Investment involves creation of physical assets	Investment is only in financial assets
Has a long term interest and therefore remain invested for long	Only short term interest and generally remain invested for short periods
Relatively difficult to withdraw	Relatively easy to withdraw

Not inclined to be speculative	Speculative in nature
Often accompanied by technology transfer	Not accompanied by technology transfer
Direct impact on employment of labour and wages	No direct impact on employment of labour and wages
Enduring interest in management and control	No abiding interest in management and control
Securities are held with significant degree of influence by the investor on the management of the enterprise	Securities are held purely as a financial investment and no significant degree of influence on the management of the enterprise

(b) Monetary policy instruments are the various direct and indirect instruments or tools that a central bank can use to influence money market and credit conditions and pursue its monetary policy objectives. In general, the direct instruments comprise of:

(a) the required cash reserve ratios and liquidity reserve ratios prescribed from time to time.

(b) directed credit which takes the form of prescribed targets for allocation of credit to preferred sectors (for e.g. Credit to priority sectors), and

(c) administered interest rates wherein the deposit and lending rates are prescribed by the central bank.

The indirect instruments mainly consist of:

(a) Repos

(b) Open market operations

(c) Standing facilities, and

(d) Market-based discount window.

9. Non-tariff measures are policy measures other than ordinary customs tariffs that can potentially have an economic effect on international trade in goods, changing quantities traded, or prices or both (UNCTAD, 2010). They form a constellation of different types of policies which alter the conditions of international trade. They are more difficult to quantify or compare than tariffs. NTMs can be instituted for a range of public policy reasons and have been negotiated within the General Agreement on Tariffs and Trade and at the World Trade Organization NTMs are allowed under the WTO's regulations and are meant to allow governments to pursue legitimate policy goals even if this can lead to increased trade costs. For example, NTMs like sanitary and phytosanitary measures and licensing could be legitimately used by members to ensure consumer health and to protect plant and animal life and environment.

Depending on their scope and/or design NTMs are categorized as:

(i) Technical Measures: Technical measures refer to product-specific properties such as characteristics of the product, technical specifications and production processes. These measures are intended for ensuring product quality, food safety, environmental protection, national security and protection of animal and plant health.

(ii) Non-technical Measures: Non-technical measures relate to trade requirements; for example; shipping requirements, custom formalities, trade rules, taxation policies, etc.

These are further distinguished as:

a. Hard measures (e.g. Price and quantity control measures),

b. Threat measures (e.g. Anti-dumping and safeguards) and

c. Other measures such as trade-related finance and investment measures.

Furthermore, the categorization also distinguishes between:

(i) Import-related measures which relate to measures imposed by the importing country, and

(ii) Export-related measures which relate to measures imposed by the exporting country itself.

NTMs are not the same as non-tariff barriers (NTBs). *NTMs* are sometimes used as means to circumvent free-trade rules and favour domestic industries at the expense of foreign competition. In this case they are called *non-tariff barriers (NTBs).* NTBs are a subset of NTMs that have a 'protectionist or discriminatory intent' and implies a negative impact on trade. NTMs only become NTBs when they are more trade restrictive than necessary. Some examples of NTBs are compulsory standards, often not based on international norms or genuine science; stringent technical regulations requiring alterations in production processes, testing regimes which require complex procedures and product approvals requiring inspection of individual premises. In addition, to these, there are procedural obstacles (PO) which are practical problems in administration, transportation, delays in testing, certification etc. that may make it difficult for businesses to adhere to a given regulation.

10. (a) The WTO addresses the special needs and problems of developing and the least developed countries in the following ways.

(i) Special and Differential Treatment (S&DT) for these countries is incorporated in the WTO laws and rules.

(ii) Developing and the least developed countries are generally given longer implementation time to conform to their obligations for promotion of freer trade.

(iii) They are also given more flexibility in matter of compliance with the WTO and special privileges and permission to phase out the transition period.

(iv) These countries are granted transition periods to make adjustments to the not so familiar and intricate WTO provisions

(v) Members may violate the principle of MFN to give special market access to developing countries.

(b) Free trade policy is based on the principle of non-interference by government in foreign trade. The distinction between domestic trade and international trade disappears and goods and services are freely imported from and exported to the rest of the world. Buyers and sellers from separate economies voluntarily trade without the domestic government helping or hindering movements of goods and services between countries by applying tariffs, quotas, subsidies or prohibitions on their goods and services. The theoretical case for free trade is based on Adam Smith's argument that the division of labour among countries leads to specialization, greater efficiency, and higher aggregate production.

(c) The Agreement on Agriculture (AoA) is an international treaty of the World Trade Organization negotiated during the Uruguay Round. It contains provisions in three broad areas of agriculture and trade policy: market access, domestic support and export subsidies. The Agreement aims to:

(i) establish fair and market oriented agricultural trading system, and

(ii) provide for substantial and progressive reduction in agricultural support and export subsidies with a view to remove distortion in the world market. These are to be achieved through enhancement of market access, reduction of domestic support and elimination of export subsidies.

(d) Devaluation is a deliberate downward adjustment in the value of a country's currency relative to another currency, group of currencies or standard. It is a policy tool used by countries that have a fixed exchange rate or nearly fixed exchange rate regime and involves a discrete official reduction in the otherwise fixed par value of a currency. The monetary authority formally sets a new fixed rate with respect to a foreign reference currency or currency basket.

Devaluation is primarily an expenditure switching policy. Ceteris paribus, the weakening of currency can have positive effects on an economy's trade balance. Devaluation increases the price of foreign goods relative to goods produced in the home country and diverts spending from foreign goods to domestic goods. Devaluation implies that foreigners pay less for the devalued currency and that the residents of the devaluing country pay more for foreign currencies. By lowering export prices, devaluation helps increase the international competitiveness of domestic industries and increases the volume of exports. Devaluation lowers the relative price of a country's exports, raises the relative price of its imports, increases demand both for domestic import-competing goods and for exports, leads to output expansion, encourages economic activity, increases the international competitiveness of domestic industries, increases the volume of exports and promotes trade balance.