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Scanner Appendix

CA Inter Group - II
(Solutions of May - 2023)

Paper - 8 : Financial Management and Economics for Finance

Paper - 8A : Financial Management

Section – A

Chapter - 2 : Types of Financing

6

Other Sources of Finance

2023 - May [6] (Or) (c)

- **Secured Premium Notes:** It is issued along with a detachable warrant and is redeemable after a notified period of say 4 to 7 years. The conversion of detachable warrant into equity shares will have to be done within time period notified by the company.

Chapter - 3 : Financial Analysis and Planning Ratio Analysis

5

Types of Ratios: Comprehensive

2023 - May [2]

Balances Sheet as on 3.3.2023

Liabilities	₹	Assets	₹
Equity Share Capital (₹ 10 per share)	8,00,000	Fixed Asset	16,66,250
		Inventory	4,65,000

Reserve & Surplus	5,95,000	Debtors	5,42,500
Long-term Debt (b.f.)	12,01,250	Loans & Advances	99,200
Current Liabilities	3,10,000	Cash & Bank	1,33,300
	29,06,250		29,06,250

Working Notes:

- Current Ratio = $\frac{CA}{CL} = 4$ times
Current Assets = $4 \times 3,10,000 = ₹ 12,40,000$
- Acid Test Ratio = $\frac{CA - Stock}{CL}$
= $\frac{12,40,000 - Stock}{3,10,000}$
= 2.5 times
Inventory = ₹ 4,65,000
- Cash Ratio = $\frac{Cash\ and\ Bank}{CL}$
= $\frac{Cash\ and\ Bank}{3,10,000} = 0.43$
Cash & Bank = 1,33,300
- Inventory HO = $\frac{Sales}{Inventory} = \frac{Sales}{4,65,000} = 6$
Sales = ₹ 27,90,000
- Debtors = Credit Sales $\times \frac{70}{360}$
= $27,90,000 \times \frac{70}{360}$
= ₹ 5,42,500
- Loans & Adv. = CA – Drs. – Inventory – C & B
= $12,40,000 - 5,42,500 - 4,65,000 - 1,33,300$
= ₹ 99,200
- Total Asset +10 = $\frac{Sales}{Total\ Assets}$
= $\frac{27,90,000}{Total\ Assets}$
= 0.96

- Total Assets = ₹ 29,06,250
8. Fixed Assets = Total Assets – Current Assets
= 29,06,250 – 12,40,000
= 16,66,250
9. Proprietor Ratio = $\frac{\text{Prop. Fund}}{\text{Total Assets}}$
= $\frac{\text{Prop. Fund}}{29,06,250}$
= 0.48
Proprietor's Fund = 0.48 × 29,06,250
= ₹ 13,95,000
10. Equity Div. Coverage = $\frac{\text{EAT}}{\text{Equity Division}}$
1.6 = $\frac{\text{EAT}}{1,75,000}$
EAT = 1.6 × 1,75,000
= ₹ 2,80,000
11. No. of Shares = $\frac{\text{EAT}}{\text{EPS}} = \frac{2,80,000}{3.5}$
= 80,000
12. Equity Share Capital = 80,000 × ₹ 10 = ₹ 8,00,000
Reserve and Surplus = 13,95,000 – 8,00,000
= ₹ 5,95,000

Chapter - 4 : Cost of Capital

6

Weighted Average Cost of Capital (WACC)

2023 - May [4]

- (a) Calculation of existing weighted average cost of capital by taking book value weight:

Particulars	Book Value	Weight (W)	Cost (K)	Weight Cost
Equity shares	₹ 30,00,000	0.60	0.2500	0.1500
Pref. shares	₹ 10,00,000	0.20	0.0800	0.0160

Debentures	₹ 10,00,000	0.20	0.0902	0.0180
Total	₹ 50,00,000	100	WACC	0.1840

Existing WACC = 0.1840 or 18.40%

(b) Calculation of weighted average cost of capital after expansion by taking book value weight:

Particulars	Book Value	Weight (W)	Cost (K)	Weight Cost
Equity shares	₹ 30,00,000	0.375	0.3000	0.1125
Pref. shares	₹ 10,00,000	0.125	0.0800	0.0100
Debentures	₹ 10,00,000	0.125	0.0902	0.0113
L/T Loan	₹ 30,00,000	0.375	0.9000	0.0338
	₹ 80,00,000	1	WACC	0.1676

Revised WACC = 0.1676 or 16.76%

Working Notes:

$$K_e = \frac{D_1}{P_0} + g = \frac{16}{80} + 5\% = 25\%$$

$$g = \frac{\sqrt[7]{14.07}}{10} - 1 = 5\%$$

$$K_p = \frac{PD + \left(\frac{RV - NP}{N}\right)}{\frac{RV + NP}{2}} \times 100 = \frac{8 + \left(\frac{106 - 104}{5}\right)}{\frac{106 + 104}{2}} \times 100 = 8\%$$

$$K_d = \frac{1(1 - t) + \left(\frac{RV - NP}{N}\right)}{\frac{RV + NP}{2}} \times 100 = \frac{12(1 - 0.40) + \left(\frac{120 - 95}{10}\right)}{\frac{120 + 95}{2}} = 9.02\%$$

$$K_e = (\text{Revised}) = \frac{D_1}{P_0} + g = \frac{18}{72} + 5\% = 30\%$$

$$K_n = 1(1 - t) = 15\% (1 - 0.4) = 9\%$$

Chapter - 5 : Financing Decisions - Capital Structure

3

Factors Determining Capital Structure

2023 - May [3]

Statement of Market Value Per Share (MPS)

Particulars	Equity Plan	Debt Plan
EBIT (9,60,000 + 6,15,000)	15,75,000	15,75,000
(-) Int. Existing	(1,20,000)	(1,20,000)
New (16% of ₹ 34,50,000)	—	(5,52,000)
EBT	14,55,000	9,03,000
(-) Tax @ 30%	(4,36,500)	(2,70,900)
PAT	10,18,500	6,32,100
(-) Pref. dividend (9% × ₹ 12,00,000)	(1,08,000)	(1,08,000)
Earnings for equity shareholder	9,10,500	5,24,100
÷ No. of equity shares (New + Existing)	1,03,000	80,000
EPS	₹ 8.84	₹ 6.55
× PE Ratio	25 times	18 times
MPS	₹ 221	₹ 177.90

Advise: Company should raise additional capital through equity plan to maximum MPS.

Working Notes:**1. Debt equity ratio if ₹ 34,50,000 is raised as equity:**

$$= \frac{10,00,000}{74,50,000 (8,00,000 + 34,50,000 + 20,00,000 + 12,00,000)} \times 100 = 13.42\%$$

As debt ratio is less than 50% the P/E ratio will remain at 25 times in plan 1.

2. Debt equity ratio if ₹ 34,50,000 is raised as debt:

$$\frac{10,00,000 + 34,50,000}{40,00,000(8,00,000 + 20,00,000 + 12,00,000)} \times 100 = 111.25\%$$

As the debt ratio is more than 80% the P/E ratio will be brought down to 18 in plan 2.

3. Existing EBIT:

$$\text{Int. Cov. Ratio} = \frac{\text{EBIT}}{\text{Int.}} = \frac{\text{EBIT}}{1,20,000} = 8$$

$$\text{EBIT} = 9,60,000$$

4. Existing EPS = $\frac{(\text{EBIT} - 1)(1 - t) - \text{PD}}{N}$

$$= \frac{(9,60,000 - 1,20,000)(1 - 0.3) - 1,08,000}{80,000}$$

$$= ₹ 6$$

5. Present MPS:

$$\text{EPS} \times \text{P/E ratio} = ₹ 6 \times 25 = ₹ 1.50$$

6. No. of equity share issued in plan 1:

$$= \frac{34,50,000}{150}$$

$$= 23,000 \text{ shares}$$

Chapter - 6 : Financing Decisions-Leverages

2

Meaning and Types of Leverages

2023 - May [1] {C} (d)

$$(i) \text{ Operating Leverage (OL)} = \frac{\text{Contribution}}{\text{EBIT}} \text{ or, } 3.125 = \frac{₹ 4,25,000}{₹ 1,36,000} \text{ or EBIT}$$

$$(ii) \text{ Degree of Combined Leverage (CL)} = \frac{\% \text{ Changes in EPS}}{\% \text{ Changes in Sales}} = \frac{100}{40} = 2.5$$

$$(iii) \text{ Combined Leverage} = \text{OL} \times \text{FL} = 3.125 \times \text{FL}$$

So, Financial Leverage = $2.5/3.125 = 0.8$

$$(iv) \text{ Financial Leverage} = \frac{\text{EBIT}}{\text{EBT}} = \frac{1,36,000}{\text{EBT}} = 0.8$$

$$\text{So, EBT} = \frac{1,36,000}{0.80} = ₹ 1,70,000$$

Calculation of EPS o X Ltd.

Particulars	(₹)
EBT	1,70,000
Less: Tax (50%)	85,000
EAT	85,000
Preference Dividend	15,000
Net Earnings for Equity Shareholders	70,000
Number of equity shares	2,500
EPS	28

2023 - May [6] (c)

Financial leverage indicates the use of funds with fixed cost like long term debts & preference share capital along with equity shares capital which is known as trading on equity. A firm is known to have a positive leverage when its earnings are more than cost of debt. When the quantity of fixed cost fund is relatively high in comparison to equity capital it is said that the firm is "Trading on Equity".

Chapter - 7 : Investment Decisions**3****Discounting Technique:
New Present Value Technique (NPV)****2023 - May [1] {C} (c)****(a) Statement showing NPV in each scenario:**

	Worst Case	Most Likely	Best Case
Contribution	3,30,000	5,40,000	6,31,250
(-) Fixed cost (excluding dep ⁿ)	(75,000)	(1,50,000)	(2,00,000)
(-) Dep ⁿ (4,50,000 – 50,000)/5 years	(80,000)	(80,000)	(80,000)

PBT	1,75,000	3,10,000	3,51,250
(-) Tax @ 40%	(70,000)	(1,24,000)	(1,40,500)
PAT	1,05,000	1,86,000	2,10,750
(+) Dep ⁿ	80,000	80,000	80,000
CFAT	1,85,000	2,66,000	2,90,750
PV of CFAT (CFAT × PVIFA _{0.125} i.e. 3.605)	6,66,925	9,58,930	10,48,154
PV of Salvage (Salvage × PVIF _{0.125} i.e. 0.567)	28,350	28,350	28,350
(-) PV of outflow	(4,50,000)	(4,50,000)	(4,50,000)
NPV	2,45,275	5,37,280	6,26,504

(b) NPV with most likely in first two years, worst case in next 2 years & best case in last year:

$$\begin{aligned} \text{NPV} &= [(2,66,000 \times 1.690) + (1,85,000 \times 1.348) + (2,90,750 \times 0.567) \\ &+ (50,000 \times 0.567)] - 4,50,000 \\ &= ₹ 4,42,125 \end{aligned}$$

2023 - May [5]

Working Notes:

(i) Calculation of Net Initial Cash Outflow

Particulars	₹
Cost of New Machine	12,00,000
Less: Sale proceeds of existing machine	2,00,000
Net Purchase Price	10,00,000
Paid in year 0	8,00,000
Paid in year 1	2,00,000

(ii) Calculation of Additional Depreciation

Year	1	2	3	4
	₹	₹	₹	₹
Opening WDV of machine	10,00,000	8,00,000	6,40,000	5,12,000

Depreciation on new machine @ 20%	2,00,000	1,60,000	1,28,000	1,02,400
Closing WDV	8,00,000	6,40,000	5,12,000	4,09,000
Depreciation on old machine (4,80,000/8)	60,000	60,000	60,000	60,000
Incremental depreciation	1,40,000	1,00,000	68,000	42,400

(iii) Calculation of Annual Profit before Depreciation and Tax (PBDT)

Particulars	Incremental Value (₹)
Sales	12,25,000
Contribution	6,12,500
Less: Indirect Cost	1,18,750
Profit before Depreciation and Tax (PBDT)	4,93,750

Calculation of Incremental NPV

Year	PVF @12 %	PBTD (₹)	Incremental Depreciation (₹)	PBT (₹)	Tax @ 30% (₹)	Cash Inflows (₹)	PV of Cash Inflows (₹)
	(1)	(2)	(3)	(4)	(5) = (4) × 0.30	(6) = (4) - (5) + (3)	(7) = (6) × (1)
1	0.893	4,93,750	1,40,000	3,53,750	1,06,125	3,87,625	3,46,149.125
2	0.797	4,93,750	1,00,000	3,93,750	1,18,125	3,75,625	2,99,373.125
3	0.712	4,93,750	38,000	4,25,750	1,27,725	3,66,025	2,60,609.800
4	0.636	4,93,750	42,400	4,51,350	1,35,405	3,58,345	2,27,907.420
*							11,34,039.470
Add: PV of Salvage (₹ 1,00,000 × 0.636)							63,600
Less: Initial Cash Outflow - Year 0							8,00,000
Year 1 (₹ 2,00,000 × 0.893)							1,78,600
Less: Working Capital - Year 0							2,50,000
Year 2 (₹ 3,00,000 × 0.797)							2,39,100

Add: Working Capital released - Year 4 ($\text{₹ } 5,50,000 \times 0.636$)	3,49,800
Incremental Net Present Value	79,739.470

Since the incremental NPV is positive, existing machine should be replaced.

Alternative Presentation

Computation of Outflow for new Machine:

	₹
Cost of new machine	<u>12,00,000</u>
Replaced cost of old machine	2,40,000
Cost of removal	<u>40,000</u>
Net Purchase price	10,00,000
Outflow at year 0	8,00,000
Outflow at year 1	2,00,000

Computation of additional depreciation:

Year	1	2	3	4
	₹	₹	₹	₹
Opening WDV of machine	10,00,000	8,00,000	6,40,000	5,12,000
Depreciation on new machine @ 20%	2,00,000	1,60,000	1,28,000	1,02,400
Closing WDV	8,00,000	6,40,000	5,12,000	4,09,600
Depreciation on old machine (4,80,000/8)	60,000	60,000	60,000	60,000
Incremental depreciation	1,40,000	1,00,000	68,000	42,400

Computation of NPV

Year	0	1	2	3	4
	₹	₹	₹	₹	₹

1.	Increase in sales revenue		12,25,000	12,25,000	12,25,000	12,25,000
2.	Contribution		6,12,500	6,12,500	6,12,500	6,12,500
3.	Increase in fixed cost		1,18,750	1,18,750	1,18,750	1,18,750
4.	Incremental Depreciation		1,40,000	1,00,000	68,000	42,400
5.	Net profit before tax [1-(2+3+4)]		3,53,750	3,93,750	4,25,750	4,51,350
6.	Net Profit after tax (5 × 70%)		2,47,625	2,75,625	2,98,025	3,15,945
7.	Add: Incremental depreciation		1,40,000	1,00,000	68,000	42,400
8.	Net Annual cash inflows (6+7)		3,87,625	3,75,625	3,66,025	3,58,345
9.	Release of salvage value					1,00,000
10.	(investment)/disinvestment in working capital	(2,50,000)		(3,00,000)		5,50,000
11.	Initial cost	(8,00,000)	(2,00,000)			
12.	Total net cash flows	(10,50,000)	1,87,625.00. 893	75,625	3,66,025	10,08,345
13.	Discounting Factors	1	0.893	0.797	0.712	0.636
14.	Discounted cash flows (12 × 13)	(10,50,000)	1,67,549.125	60,273.125	2,60,609.800	641307.420

$$\text{NPV} = (1,67,579 + 60,273 + 2,60,610 + 6,41,307) - 10,50,000 = ₹ 79,739$$

Since the NPV is positive, existing machine should be replaced.

Chapter - 9 : Dividend Decisions

1

Forms of Dividend

2023 - May [6] (a)

To issue Bonus shares, a Company needs to fulfill all the conditions given by Securities Exchange Board of India (SEBI):

- (i) As per SEBI, the bonus shares are issued not in lieu of cash dividends.
- (ii) A bonus issue should be authorized by Article of Association (AOA) and not to be declared unless all partly paid-up shares have been converted into fully paid-up shares.
- (iii) The Company should not have defaulted on re-payment of loan, interest, and any statutory dues.
- (iv) Bonus shares are to be issued only from share premium and free reserves and not from capital reserve on account of fixed assets revaluation.

4

Theories of Dividend: Modigliani and Miller (M.M.) Hypothesis

2023 - May [1] {C} (a)

$$(a) \text{ MP of Share} = \frac{D + (E - D) \times \frac{r}{k_e}}{k_e}$$

$$130 = \frac{D + (10 - D) \times \frac{0.12}{0.08}}{0.08}$$

$$10.40 = D + (10 - D) \times \frac{0.12}{0.08}$$

$$\begin{aligned} 10.40 &= D + 15 - 1.5D \\ 0.5D &= 4.6 \\ D &= ₹ 9.20 \end{aligned}$$

$$\text{Dividend Payment (Payout)} = \frac{9.20}{10} \times 100 = 92\%$$

$$\text{WN: } K_e = 1/PE = 1/12.5 = 8\%$$

- (b) $r > K_e$, therefore as per walter model optimum dividend payout is Nil

$$\text{MP} = \frac{D + (E - D) \times \frac{r}{k_e}}{k_e} = \frac{0 + (10 - 0) \times \frac{0.12}{0.08}}{0.08} = ₹ 187.5$$

- (c) The P/E ratio at which the dividend policy will have no effect on the value of the share is such at which the k_e would be equal to rate of return (r) of the firm.

$$K_e = r = 12\%$$

$$PE = 1/k_e = 1/12\% = 8.33 \text{ times}$$

- (d) MP of share = EPS × PE = 10 × 8.33 = ₹ 83.33

- (e) **MP of Share using Dividend Growth Model:**

$$P = \frac{D_1}{K_e - g} = \frac{9.20}{0.08 - 0.0096} = ₹ 130.68$$

$$\text{WN: } G = b \times r = 12\% \times 0.08 = 0.96\%$$

Chapter - 10 : Introduction to Working Capital Management

1

Meaning and Concept of Working Capital

2023 - May [6] (b)

- Permanent working capital refers to the base working capital, which is the minimum level of investment in the current assets that is carried by the entity at all times to carry its day to day activities. It generally stays invested in the business, unless the operations are scaled up or down permanently which would also result in increase or decrease in

permanent working capital.

- Temporary working capital refers to that part of working capital, which is required by an entity in addition to the permanent working capital. It is also called variable or fluctuating working capital which is used to finance the short-term working capital requirements which arises due to fluctuation in sales volume.

Chapter - 13 : Management of Receivables & Payables

1

Approaches to Evaluation of Credit Policies

2023 - May [1] {C} (b)

Statement of Evaluation

Particulars	Present	Proposal
Sales Value	12,00,000	15,00,000
(-) Variable cost @ 80%	(9,60,000)	(12,00,000)
Contribution @ 20%	2,40,000	3,00,000
(-) Bad debts @ 2% of sales	(24,000)	(30,000)
(-) Cash discount (WN)	(6,000)	(24,000)
Expected PBT	2,10,000	2,46,000
(-) Tax @ 30%	(63,000)	(73,800)
Expected PAT	1,47,000	1,72,200
(-) Cost of Investment (WN)	(16,000)	(15,000)
Net PAT	1,31,000	1,57,200

Advise: Company should change its credit terms having higher net benefit after tax.

WN:

1. Calculation of Cost of Investment:

$$\text{Existing} = 9,60,000 \times 15\% \times \frac{40}{360} = 16,000$$

$$\text{Proposed} = 12,00,000 \times 15\% \times \frac{30}{360} = 15,000$$

2. **Calculation of Cost of Discount:**

$$\text{Existing} = 12,00,000 \times 50\% \times 1\% = 6,000$$

$$\text{Proposed} = 15,00,000 \times 80\% \times 2\% = 24,000$$

Paper - 8B : Economics for Finance

Section – B

Chapter - 1 : Determination of National Income

1.7

***Measurement of National Income in India:
Expenditure Method***

2023 - May [7] {C} (a)

Calculation of National Income Using Expenditure Method

$$\begin{aligned} \text{NDP}_{\text{MP}} &= \text{Private Final - Consumption expenditure} + \text{Net domestic fixed} \\ &\quad \text{investment} + \text{Govt Final - Consumption expenditure} + \text{Net} \\ &\quad \text{exports (Exports - Imports)} \\ &= 1,620 + 500 + 750 + (400 - 440) \\ &= 1,620 + 1,250 - 40 \\ &= 1,620 + 1,210 \end{aligned}$$

$$\text{NDP}_{\text{MP}} = \text{₹ } 2,830 \text{ cr}$$

$$\begin{aligned} \text{NNP}_{\text{MP}} &= \text{NDP}_{\text{MP}} + \text{Net factor Income from abroad} \\ &= 2,830 + 20 \end{aligned}$$

$$\text{NNP}_{\text{MP}} = \text{₹ } 2,850 \text{ cr}$$

$$\begin{aligned} \text{NNP}_{\text{FC}} &= \text{National Income} = \text{NNP}_{\text{MP}} - \text{Net Indirect Taxes} \\ &= 2,850 - 100 \end{aligned}$$

$$\text{NNP}_{\text{FC}} = \text{₹ } 2,750 \text{ cr}$$

2.2

**The Aggregate Demand Function:
Two Sector Model**

2023 - May [8] (a) (i)

$$Y = C + I$$

$$Y = C_a + bY + I$$

$$Y - bY = C_a + I$$

$$Y(1 - b) = C_a + I$$

$$10,000(1 - 0.8) = 1000 + I$$

$$10,000 \times 0.2 = 1000 + I$$

$$2000 = 1000 + I$$

$$I = ₹ 1,000 \text{ cr}$$

$$Y = C + I$$

$$C = Y - I = 10,000 - 1000$$

$$= ₹ 9,000 \text{ cr}$$

$$\text{Investment expenditures} = ₹ 1,000 \text{ cr}$$

$$\text{Consumption expenditure} = ₹ 9,000 \text{ cr}$$

Alternative presentation

$$\text{Equilibrium level of income (Y)} = ₹ 10,000 \text{ crores}$$

$$\text{Autonomous consumption (a)} = ₹ 1,000 \text{ crores}$$

$$\text{Marginal Propensity to Consume (MPC)} = 0.8$$

$$C = a + \text{MPC}(Y)$$

$$\text{Consumption expenditure (C)} = 1000 + 0.8 * 10,000 = 1000 + 8000$$

$$C = ₹ 9,000 \text{ crores.}$$

Similarly,

$$Y = C + I$$

$$\text{Investment expenditure (I)} = Y - C = 10000 - 9000 = ₹ 1,000 \text{ crores.}$$

2023 - May [9] (a) (ii)

$$I = 5000$$

$$\text{MPC} = 0.82$$

$$\text{Multiplier K} = \frac{1}{1 - \text{MPC}} = \frac{1}{1 - 0.82} = \frac{1}{0.18} = 5.55$$

$$\text{MPS} = 1 - \text{MPC} = 1 - 0.82 = \mathbf{0.18}$$

$$\begin{aligned} \text{Increase in Income} &= \Delta Y = K \times \Delta I \\ &= 5.55 \times 5000 \\ &= \mathbf{\text{₹ } 27,750 \text{ cr}} \end{aligned}$$

$$\begin{aligned} \text{Increase in Saving} &= Y \times \text{MPS} \\ &= 27750 \times 0.18 \\ &= \mathbf{\text{₹ } 4995 \text{ cr}} \end{aligned}$$

2.4***The Investment Multiplier*****2023 - May [11] (b) (Or) (ii)****The leakages are caused due to:**

- (i) Progressive rates of taxation which result in no appreciable increase in consumption despite increase in income.
- (ii) Increased demand for consumer goods being met out of the existing stocks on through imports.
- (iii) Undistributed profits of corporations.
- (iv) Part of increment in income used for payment of debts.
- (v) Case of full employment additional investment will only lead to inflation.
- (vi) Scarcity of goods and service despite having high MPC.

2.5***Determination of Equilibrium Income:
Three Sector Model*****2023 - May [11] (a) (i)**Spending Multiplier = $1/1-b$

$$5 = 1/1-b$$

$$5 - 5b = 1$$

$$b = 4/5 = 0.8$$

$$\text{MPC} = 0.8$$

Change in GDP = Initial Change in Government Expenditure × Spending

$$\begin{aligned} \text{Multiplier} \\ &= 10 \times 5 = ₹ 50 \text{ Cr} \end{aligned}$$

$$\begin{aligned} \text{Tax Multiplier} &= -b/1-b \\ &= -0.8/1-0.8 \\ &= -0.8/0.2 \\ &= -4 \end{aligned}$$

$$\begin{aligned} \text{Decrease in GDP} &= \text{Initial Change in Tax} \times 4 \\ &= 5 \times 4 \\ &= ₹ 20 \text{ crore} \end{aligned}$$

Net Result is Output increases by 30 crore.

2.6

Determination of Equilibrium Income: Four Sector Model

2023 - May [10] (a) (i)

$$\begin{aligned} \text{(a) } Y &= C + I + G + X - M \\ &= 80 + 0.8(Y - 0.2Y) + 140 + 90 + 100 - (50 + 0.09Y) \\ &= 80 + 0.64Y + 330 - 50 - 0.09Y \\ &= 360 + 0.55Y \\ &= 360 + 0.45 \\ &= ₹ 800 \text{ crores} \end{aligned}$$

$$\begin{aligned} \text{(B) Foreign trade Multiplier} &= \frac{1}{1 - 0.8(1 - 0.2) + 0.09} \\ &= 1/0.45 \end{aligned}$$

$$\text{Change in } I = ₹ 30$$

(C) If investment is increased by ₹ 30 crores:

$$\Delta Y/30 = 1/0.45$$

$$\Delta Y = 66.67$$

$$Y = ₹ 866.67 \text{ Crores}$$

$$\begin{aligned} \text{Net export} &= 100 - 50 - (0.09 \times 866.67) \\ &= - ₹ 28 \text{ Crores} \end{aligned}$$

Chapter - 2 : Public Finance

1.4***Stabilisation Function*****2023 - May [9] (b) (ii)**

- The contagion effect explains the possibility of spread of economic crisis on boom across countries or regions.
- Stagflation is the combination of high consumer price inflation and stagnant economic growth, usually accompanied by rising unemployment. It is a state of affairs in which inflation and unemployment exist side by side.

2.1***The Concept of Market Failure*****2023 - May [10] (b) (ii)**

- (a) Marginal external cost
- (b) Marginal social benefit
- (c) Marginal external benefit
- (d) Marginal social cost

3***Unit III: Government Interventions to correct Market Failure*****2023 - May [8] (a) (ii)****Government Interventions:****For combating the problem of market failure due to information failure the following interventions are resorted to:**

- Govt. makes it mandatory to have accurate labelling and content disclosures by producers.
- Public dissemination of information to improve knowledge and subsidizing of initiatives in that direction.
- Regulation of advertising and setting of advertising standard to make advertising more responsible, informative and less persuasive.

4***Unit 4: Fiscal Policy***

2023 - May [7] {C} (d)

Under such circumstances, a contractionary fiscal policy will have to be used. It is fiscal policy aimed at eliminating inflationary gap. This is achieved by adopting policy measures that would result in aggregate demand curve shift to the left so the equilibrium may be established at full employment level of real GDP.

This can be achieved either by:

- Decrease in government spending.
- Increase in personal income taxes and/or business taxes.
- A combination of decrease in govt. spending & increase in personal income taxes and/or business taxes.

Chapter - 3 : Money Market**1.4*****Theories of Demand for Money*****2023 - May [9] (b) (i)**

- (a) **Same Conclusion:** The Fisher's and Cambridge version lead to the same conclusion that there is a direct and proportional relationship between the quantity of money and the price level and an inverse proportionate relationship between the quantity of money and the value of money.
- (b) **Money as the same Phenomenon:** The different symbols given to total quantity of money in the two approaches refer to the same phenomenon. As such MVTMV of Fisher's equation, M of the equations of Pigou and Robertson, and N of Keynes' equation refer to the total quantity of money.

2.2***Measurement of Money Supply*****2023 - May [7]{C} (b)**

$$\begin{aligned} \text{Reserve Money} &= \text{Currency in Circulation} + \text{Banker's Deposits with RBI} + \\ &\quad \text{'Other' Deposits with RBI} \\ &= 28,637 + 5,673 + 210 \end{aligned}$$

$$= 34,520 \text{ crores}$$

2023 - May [8] (b) (i)

M_1 = Notes in circulation + Circulation of Rupee Coin – Cash in hand with Banks + Demand Deposits with Bank + Other Deposits with RBI

$$= 3,01,78,670 + 6,48,902 - 7,64,130 + 1,41,31,650 + 3,98,048$$

$$= 4,45,93,140 \text{ crores}$$

M_4 = M_3 + Total deposits with post office savings organisation (excluding NSC)

$$= 4,77,17,416 + 2,02,684$$

$$= 4,79,20,100 \text{ crores}$$

M_3 = M_1 + Net time deposits with the banking system

$$= 4,45,93,140 + 31,24,276$$

$$= 4,77,17,416 \text{ crores}$$

2.5***Effect of Government Expenditure on Money Supply*****2023 - May [10] (a) (ii)**

Deposit Multiplier = $1/\text{Required Reserve Ratio} = 1/0.2 = 5$ Times

Deposit Creation = Initial Deposit \times Multiplier

$$= ₹ 50,000 \times 5$$

$$= ₹ 2,50,000$$

3.2***The Monetary Policy Framework*****2023 - May [11] (b) (i)**

Repurchase options or in short 'Repo', is defined as an instrument for borrowing funds by selling securities with an agreement to repurchase the securities or a mutually agreed future date at an agreed price which includes interest for the funds borrowed." Repo injects liquidity into the system, high repo rate increase bank rate of commercial bank. In simple the cost of borrowings for retail and other loans by the bank also rises.

"Reverse Repo' is defined as an instrument for lending funds by purchasing securities with an agreement to resell the securities on a mutually

agreed future date at an agreed price which includes interest for the funds lent. Reverse repo absorbs the liquidity from the system, an increase in the reverse repo rate will decrease money supply, other things remaining consent.

Chapter - 4 : International Trade

1.2

Important Theories of International Trade

2023 - May [9] (a) (i)

(a) **Productivity of Labour:**

Output of Commodity	Units in Country G	Units in County H
Sugar	0.17	0.50
Steel	0.40	0.20

- (b) Since one hour of labour time produces 0.40 units of steel in country G against 0.20 units in country H, country G has absolute advantage in production of steel.
- (c) A country has an absolute advantage in producing a good over another country if it requires fewer resources to produce that good. Since one hour of labour time produces 0.5 units of sugar in country H against 0.17 units in country G, country H has absolute advantage in production of sugar.

2

Unit II: The Instruments of Trade Policy

2023 - May [11] (b) (ii)

- (a) In case of severe shortage of an essential product X in Indian domestic market due to its less production, government should encourage import of product X by reducing import tariff and liberalization in non-tariff measures of product X.
- (b) If export of product Y is decreasing continuously due to cost and competition in the international market, government should reduce export taxes and provide export subsidies and incentives on product Y.

3

Unit III: Trade Negotiations**2023 - May [10] (b) (i)****WTO is better than GATT because:**

- (i) GATT was ad hoc & provisional.
- (ii) The WTO and its agreement are permanent.
- (iii) The WTO has "Member". GATT had "Contracting Parties" under scoring the feet that officially GATT was a legal text.
- (iv) GATT dealt with trade in goods. The WTO crores services and intellectual property as well.
- (v) The WTO dispute settlement system is faster, more automatic than the gold GATT system. Its rulings can't be blocked.

4

Unit IV: Exchange Rate and its Economic Effects**2023 - May [8] (b) (ii)**

In the real world, there is a spectrum of 'intermediate exchange rate regimes' which are either inflexible or have varying degree of flexibility that lie in between these two extremes (fixed and flexible). **For example**, a central bank can implement soft peg and hard peg policies. A soft peg refers to an exchange rate policy under which the exchange rate is generally determined by the market, but in case the exchange rate tends to be move speedily in one direction, the central bank will intervene in the market. Both soft peg and hard peg policy require that the central bank intervenes in the foreign exchange market.

2023 - May [11] (a) (ii)**Arbitrage Process:**

- S: 1 Conversion of £ 2,00,000 into US \$
 $\text{£ } 2,00,000 = 2,00,000 \times \$ 1.3 = \text{US } 2,60,000$
- S: 2 Conversion of US \$ 2,60,000 into ₹ US & 2,60,000 = 2,60,000 × ₹ 80
 $= ₹ 2,08,00,000$
- S: 3 Conversion of ₹ 2,08,00,000 into £

$$₹ 2,08,00,000 = 2,08,00,000 \div 100 = ₹ 2,08,000$$

Hence the arbitrage gain is ₹ 8000

5

Unit V: International Capital Movements

2023 - May [7] {C} (c)

Foreign Direct Investment (FDI) vs Foreign Portfolio – Investment (FPI):

FDI	FPI
• Investment involves creation of physical assets.	• Investment is only in financial assets.
• Has a long term interest and there fore 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.

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