INTER CA – MAY 2018

PAPER 8 : FINANCIAL MANAGEMENT & ECONOMICS

Branch: Multiple Date:

SECTION 1 : FINANCIAL MANAGEMENT (60 Marks)

Question 1 is compulsory, attempt any 5 from the rest.

Q 1

(A) Computation of ROE under alternative financing policies (amounts in `)

(1 mark for each calculation)

Particulars	Restricted (40%)	Moderate (50%)	Relaxed (60%)
1. Current Assets (% of sales)	12,00,000	15,00,000	18,00,000
2. Fixed Assets	6,00,000	6,00,000	6,00,000
3. Total Assets (1 + 2)	18,00,000	21,00,000	24,00,000
4. Debt (50% of Total Assets)	9,00,000	10,50,000	12,00,000
5. Equity (50% of Total Assets)	9,00,000	10,50,000	12,00,000
6. Total Liabilities and Equity (4 + 5)	18,00,000	21,00,000	24,00,000
7. Sales	30,00,000	30,00,000	30,00,000
8. EBIT at 15% on Sales	4,50,000	4,50,000	4,50,000
9. Interest (10% on Debts)	90,000	1,05,000	1,20,000
10. EBT (8 – 9)	3,60,000	3,45,000	3,30,000
11. Tax at 40% on EBT	1,44,000	1,38,000	1,32,000
12. EAT = Net Income (10 – 11)	2,16,000	2,07,000	1,98,000
13. Return on Equity = EAT ÷ Equity	24.00%	19.70%	16.50%

(B) (1 mark for each calculation)

Firm		P	Q	R
	Sale Quantity	2,50,000 units	1,25,000 units	7,50,000 units
	Sale Price per unit	` 7.50	` 7.00	` 10.00
Less:	Variable Costs per unit	` 5.00	` 2.00	` 7.50
	Contribution per unit	` 2.50	` 5.00	` 2.50
	Total Contribution (Qtty x Cn pu)	` 6,25,000	` 6,25,000	` 18,75,000
Less:	Fixed Costs	` 5,00,000	` 2,50,000	` 10,00,000
	EBIT	` 1,25,000	` 3,75,000	` 8,75,000
Less:	Interest	` 75,000	` 25,000	-
	EBT	`5 0,000	` 3,50,000	` 8,75,000
Degree of Operating Leverage = $\frac{Contribution}{EBIT}$		5.00	1.67	2.14
Degree of Financial Leverage = $\frac{EBIT}{EBIT}$		2.50	1.07	1.00
Degree of Combined Leverage = DOL x DFL		12.50	1.79	2.14

Inference: Overall Risk of Firm P is the highest while that of Firm Q is the least.

(C)

Particulars (amount in `)		Plan 1 (2 ½ marks)	Plan 2 (2 ½ marks)
Depreciation		ESC = ` 4 Lakhs, PSC = Nil and Debts =` 2 Lakhs	ESC = ` 4 Lakhs, Debt = Nil and PSC = ` 2 Lakhs
	EBIT (given)	2,40,000	2,40,000
Less:	Interest at 12% of ` 2,00,000	24,000	Nil
	EBT	2,16,000	2,40,000
Less:	Tax at 30%	64,800	72,000
	EAT	1,51,200	1,68,000
Less:	Preference Dividend	Nil	X
	Residual Earnings for Equity Shareholders	1,51,200	1,68,000 – X
	Number of Equity Shares (4,00,000 ÷ 10)	40,000 Shares	40,000 Shares

EPS = $\frac{Residual\ Earnings}{No.\ of\ Equity\ Shares}$	$\frac{1,51,200}{40,000\ Shares}$ = 3.78	$\frac{1,68,000-X}{40,000\ Shares}$ = 3.78

For Indifference between the above alternatives, EPS should be equal. So, $\frac{1,51,200}{40,000\ Shares}$ = 3.78 = $\frac{1,68,000-X}{40,000\ Shares}$

On solving, X = 16,800. So, Rate of Preference Dividend = $\frac{16,800}{2,00,000}$ = 8.4%

(D) 1. Computation of Net Present Value (1 mark)

NPV = Discounted Cash Inflow (Less) Initial Investment = (Annual Cash inflow x PVAF) Less Initial Investment
NPV = (` 45,000 X 3.169) Less ` 1, 8,000 = ` 1, 42,605 - ` 1, 8,000 = ` 22,605.

2. Sensitivity Analysis (3 marks)

Factor	Revised Value at which NPV = 0	Sensitivity = $\frac{Revised\ Value\ (-)Vase\ Value}{Base\ Value}$
Initial Invt	Since NPV should be "Nil", the Dcf Shoul be equal to Initial Invt. Hence, Revised Initial Invt = DCF itself = ` 1,42,605	$\frac{1,42,605\ (-)1,20,000}{1,20,000}$ = 18.84%
Discount Rate	Required: To compute Discount Factor at which NPV = 0 Hence, (` 45,000 x PVAF) Less ` 1,8,000 = 0 On solving, PVAF = 2.6667. From the Tables, Disc. Rate for PVAF 2.6667 for 4 Yrs is 18.13%	$\frac{18.13\%\ (-)10.00\%}{10.00\%}$ = 81.30%
Annual Cash Inflow	Required: To compute Annual Cash Inflow at which NPV = 0. Let the Annual Cash Inflow be `C' Hence, (C x 3.169) Less ` 1,8,000 = 0 On solving, C = 37,866	(See Note) $\frac{37,866,(-)45,000}{45,000}$ = 15.85%

Conclusion: Profitability of the Project is most sensitive to the Annual Cash Inflow due to least Sensitivity Index. (1 mark)

Note: In meaning Sensitivity, only Absolute Change is considered. Hence, direction of change, i.e. +/-, is not relevant.

Q 2

(A) The following issues / matters have led to change in the work profile of the CFO –

(1/2 mark for each point)

1. Reporting: Financial Reporting requirements have become more wide and broadened, requiring more quality and expertise in handling the same.
2. Regulations: Statutory / Regulatory Requirements have increased in terms of Taxation Law, Corporate and Business Law, RBI Regulations, etc. CFO's have personal responsibility in ensuring compliance thereof.
3. Talent and Capability: More focus will be on functional area talent, managing and organizing capability (team management, cross-functional group handling, etc), for the person who dons the top role in Finance.
4. Globalisation: CFOs are required to do their basic finance functions (procuring and using funds) in the global market. They have to manage these functions on the global stage and maximize return on investment.
5. Risk Management: The nature of risks faced by Business Entities requires more effective Risk Management Methodologies. CFOs have to play a lead role in Entity risk management.
6. Technology: CFOs have better tools and techniques, using technology, for all their functions. CFOs have to be adept in using technology and using it to their advantage.
7. Stakeholder Management: CFO may be viewed as the face of the Corporate Brand, leading to a higher need for managing Stakeholder Relationships.
8. Strategy: In view of the dynamic environment in which the Entity operates, the CFO is viewed as the "Auditor" for Strategy Validation and Execution.
9. Service Function: Finance is now viewed as a "Service Function", leading to business expectations of providing the best possible service at the least cost.)

(B)

Particulars	Project X (2 marks)			Project Y (2 marks)		
	Worst	Most Likely	Best	Worst	Most Likely	Best
Annual Inflow	5	8	15	8	10	8
Annuity Factor @ 14% for 10 Years	5.216	5.216	5.216	5.216	5.216	5.216
Present Value of Cash Inflows	26.08	41.73	78.24	41.73	52.16	104.32
Less: Initial Investment	(30.00)	(30.00)	(30.00)	(30.00)	(30.00)	(30.00)
Net Present Value	(3.92)	11.73	48.24	11.73	22.16	74.32

Recommendation: Project Y is preferable over Project X, since, even in worst case scenario, Project Y is profitable, Whereas Project X entails loss.

Q 3 (1 mark for each calculation)

(A) Balance Sheet as on 31st March

Liabilities	`	% Assets		`
Equity Share Capital (given)	4,00,000	Plant and M/c and other Fixed Assets (bal.		4,25,000
Reserves and Surplus (given)	6,00,000	Current Assets:		
Total Debt:		Inventory	(WN 7)	7,00,000
Current Liabilities (WN 2)	5,00,000	Debtors	(WN 6)	3,33,333
		Cash	(WN 8)	41,667
Total	15,00,000	Total		15,00,000

Working Notes and Calculations

1. Net worth = equity Share Capital + Reserves and Surplus = ` 40,000 + ` 6,00,000 = ` 10,00,000.

2. $\frac{Total\ Debt}{Net\ Worth} = \frac{1}{2}$ So, $\frac{Total\ Debt}{`\ 10,00,000} = \frac{1}{2}$. Hence, Total Debt = $\frac{`\ 10,00,000}{2}$ = ` 5,00,000.

3. Total of Balance Sheet (on Liabilities Side) = ` 15,00,000 (after updating WN 2). So, Total Assets = 15,00,000

4. Total Assets T/O = $\frac{Turnover}{Total\ Assets} = \frac{Turnover}{`\ 15,00,000}$ = 2. SO, Turnover (i.e. Sales) = ` 15,00,000 x 2 = ` 30,00,000

5. Cost of Goods sold (COGS) = Sales Less GP = ` 30,00,000 Less 30% thereon = ` 21,00,000.

6. Debtors = Sales x $\frac{40}{360}$ = ` 30,00,000 x $\frac{40}{360}$ = ` 3,33,333

7. $\frac{COGS}{Closing\ Inventory} = \frac{21,00,000}{Closing\ Inventory}$ = 3 times. So, Closing Inventory = $\frac{21,00,000}{3}$ = ` 7,00,000

8. Acid Test ratio = $\frac{Quick\ Assets}{Quick\ Liabilities} = \frac{Debtors\ Cash}{Current\ Liabilities} = \frac{3,33,333+cash}{5,00,000}$ = 0.75 . On solving, Cash = ` 41,667

Note : Quick Liabilities = current Liabilities in this question, since there is no Bank Overdraft in the B/s format.

Q 4

(A)

1. Meaning: Bridge Finance refers to loans taken by a Company usually from Commercial Banks, for a short period, pending disbursement of loans sanctioned by Financial Institutions. (1 mark)
2. Sanction: (2 marks)
   (a) When a Promoter or an Enterprise approaches a Financial Institution for a long-term loan, there may be some normal time delays in project evaluation, administrative & procedural formalities and final sanction.
   (b) Since the project commencement cannot be delayed, the Promoter may start his activities after receiving "in-principle" approval from the term lending institution.
   (c) To meet his temporary fund requirements for starting the project, the Promoter may arrange short-term loans from Commercial Banks or from the term lending institution itself.
   (d) Such temporary finance, pending sanction of the long term loan, is called as "Bridge Finance".
   (e) This Bridge Finance may be used for - (i) paying advance for factory land / machinery acquisition, (ii) purchase of equipments, etc.

3. Terms: (1 mark)

(a) Interest: The interest rate on Bridge Finance is higher when compared to term loans.

(b) Repayment: These are repaid or adjusted out of the term loans when disbursed by the concerned institutions.

(c) Security: These are secured by hypothecating movable assets, personal guarantees & promissory notes.

(B)

Nature	Year	Disc. Factor	Quote A (1 ½ marks)		Quote B (1 ½ marks)	
			Cash Flow	DCF	Cash Flow	DCF
Initial Lease Rent	0	0	5.00 - 30% = 3.50	3.50	1.00 - 30% = 0.70	0.70
Annual Lease	1-3	0.91+ 0.83 + 0.75 = 2.49	21.06 - 30% = 14.74	36.70	-	-
	1-4	2.49 + 0.68 = 3.17	-	-	19.66 - 30% = 13.76	43.62
Net Present Cost (Lakhs)				40.20		44.32
Annuity Factor				2.49		3.17
Net Present Cost Equivalent Annual Cost (? Lakhs)				16.14		14.00

Conclusion: Since, the lease period is not uniform, suitable method for evaluation is Equivalent Annual Cash Flow method. Based on EAC, Quote B is beneficial to P Ltd since it has a lower net cash cost per annum. (1 mark)

Note: Taxes are assumed to be paid out / saved at the point of Cash Flow itself.

Q 5

1. Computation of Collection from Debtors (2 marks)

Particulars	April	May	June	July	August	September
(a) Total Sales	` 4,20,000	` 4,50,000	` 5,00,000	` 4,90,000	` 5,40,000	` 6,10,000
(b)Cash Sales	` 84,000	` 90,000	` 1,00,000	` 98,000	` 1,08,000	` 1,22,000
(c) Cr. Sales	` 3,36,000	` 3,60,000	` 4, 00,000	` 3,92,000	` 4,32,000	` 4,88,000
(d) Receipt: 50%		50% x 3,36,000 = ` 1,68,000	50%x 3,60,000 = ` 1,80,000	50% x 4,00,000 =`2,00,000	50% x 3,92,000 = ` 1,96,000	50% x 4,32,000 = ` 2,16,000
50%			50%x 3,36,000 = ` 1,68,000	50%x 3,60,000 = ` 1,80,000	50% x 4,00,000 = ` 2,00,000	50% x 3,92,000 = `1,96,000
Total Rcpts			` 3,48,000	` 3,80,000	` 3,96,000	` 4,12,000

2. Cash Budget for the months of June, July, August and September (amounts in `) (6 marks)

Particulars	June	July	August	September
A. Opening Balance	45,000	45,500	45,500	45,000
B. Receipts / Inflows				
Cash Sales (20% of respective month's Sales) Collection	1,00,000	98,000	1,08,000	1,22,000
from Debtors (WN 1)	3,48,000	3,80,000	3,96,000	4,12,000
Interest on Investments (given)	25,000	-	-	-
Total Receipts	4,73,000	4,78,000	5,04,000	5,34,000
C. Payments / Outflows				
Creditors (2 months) April paid in June, and so on.	2,00,000	2,10,000	2,60,000	2,82,000
Wages (½ of prev month + V2 of Current month)	1,62,500	1,65,000	1,65,000	1,67,500
OH (1 month) Hence, previous month exp. paid now	40,000	38,000	37,500	60,800
Interest on Debentures (6% on ` 5,00,000)	30,000	-	-	-
Instalment on Machinery (` 4,00,000÷20 mths)	-	20,000	20,000	20,000
Advance Tax (given)	-	-	15,000	-
Total Payments	4,32,500	4,33,000	4,97,500	5,30,300
D. Closing Balance before investment in FD (A + B - C)	85,500	90,500	52,000	48,700
E. Investment in Fixed Deposit (multiples of 1000) (b/f)	40,000	45,000	7,000	3,000
F. Closing Balance (D - E) (required around ` 45,000)	45,500	45,500	45,000	45,700

Note: Fixed Deposit can also be made rounded off to higher side, i.e. ` 41,000 in June, etc. so as to have Cash Balance of ` 44,500 (i.e. around 7 45,000).

Q 6

1. Computation of NPV and PI (4 marks)

Particulars	Project A (CFAT ` 4, 00,000 p.a.)	Project B (CFAT ` 5, 80,000 p.a.)

Discount Rate	10%	18%	20%	10%	18%	20%
Annuity Factor	3.791	3.127	2.991	3.791	3.127	2.991
Total DCFAT	` 15,16,400	` 12,50,800	` 11,96,400	` 21,98,780	`18,13,660	` 17,34,780
Less: Initial Investment	` 12,00,000	` 12,00,000	` 12,00,000	` 18,00,000	` 18,00,000	` 18,00,000
NPV	` 3,16,400	` 50,800	(` 3,600)	` 3,98,780	` 13,660	(` 65,220)
PI = $\frac{\text{Total DCFAT}}{\text{Initial Investment}}$	1.26	NA	NA	1.22	NA	NA

2. Computation of IRR for (a) Project A

From the above, i.e. with one +ve NPV and one –ve NPV, IRR is estimated using the number line, as under –

20% — Change in NPV= 54,400 for 2% — 18%

–ve side | +ve side

NPV =– 3,600 | NPV = 0 (Zero) | NPV=+50,800

Rate Change for 3,600 = $\frac{3,600}{54,400} \times 2\% = \mathbf{0.13\%}$

Rate Change for 50,800 = $\frac{50,800}{54,400} \times 2\% = \mathbf{1.87\%}$

IRR = 20% – 0.13% **(or)** 18% + 1.87% = **19.87%**

(b) Project B

From the above, i.e. with one +ve NPV and one –ve NPV, IRR is estimated using the number line, as under –

20% — Change in NPV= 78,880 for 2% — 18%

–ve side | +ve side

NPV =– 65,220 | NPV = 0 (Zero) | NPV=+13,660

Rate Change for 65,220 = $\frac{65,220}{78,880} \times 2\% = \mathbf{1.65\%}$

Rate Change for 13,660 = $\frac{13,660}{78,880} \times 2\% = \mathbf{0.35\%}$

IRR = 20% – 1.65% **(or)** 18% + 0.35% = **18.35%**

3. Decision:

Particulars	Project A	Project B	Preference
NPV at K_o (i.e. 10%)	₹ 3,16,400	₹ 3,98,780	Project A
PI at K_o (i.e. 10%)	1.26	1.22	Project A
IRR	19.87%	18.35%	Project A

(4 marks)

Q7

a. 2 marks for each calculation

Solution:

1. Value of Stock under Dividend Growth Model

Value of Stock = $\frac{D_0 \times (1+g)}{(K-g)} = \frac{₹\ 2.50 \times (1+2\%)}{10.50\% - 2\%} = \frac{₹\ 2.50 \times 1.02}{0.105 - 0.02} = \frac{₹\ 2.55}{0.085} = ₹\ \mathbf{30}$

2. Evaluation of Stock Price

(a) PE Multiple Approach

Particulars	Value
(a) Price Earning Multiple = $\frac{1}{\text{Return on Equity}} = \frac{1}{9\%}$ =	11.11 times
(b) Market Price per Share [EPS × Price Earning Multiple] = ₹ 2.25 × 1.11 times	₹ 25.00
(c) Since Actual Stock Price is ₹ 35, Share of ABC Ltd is **overvalued** (using PE Multiple approach).	Higher

(b) Gordon's Model

(a) Assuming all Earnings are distributed as Dividends, i.e. DPS = ₹ 2.25,

MPS using Gordon's Model = $\frac{D_0 \times (1+g)}{(K-g)} = \frac{2.25 \times 1.02}{9\% - 2\%}$ = ₹ 32.79

(b) Since Actual Stock Price is ₹ 35, it is **overvalued** (using Gordon's Model).

b. (2 marks for each)

Advantages (Any 2)
(i) Emphasizes the long term gains
(ii) Recognises risk or certainity
(iii) Recognises the timing of returns
(iv) Considers shareholder's return.
Disadvantages

(i) Offers no clear relationship between financial decisions and share price.
(ii) Can lead to management anxiety and frustration

SECTION 2 : ECONOMICS (40 marks)

Question 1 is compulsory. Attempt any 4 from the rest

Q 1

(A)

1. Concept: (1 mark)
   (a) Generally, measurement of Money Value at Market Prices is "Gross Value", i.e. inclusive of Depreciation, (or in other words, without subtracting Depreciation).
   (b) However, Depreciation, (i.e. the portion of Capital Stock used up in the process of production), must be subtracted from the Final Sales Value, because Depreciation represents Capital Consumption, and is a Cost of Production.
   (c) So, the basis of distinction between "Gross" and "Net" Measures is Depreciation Expense.
2. Significance of Depreciation = Capital should remain intact: (2 marks)
   (a) For a continuous flow of money payments, it is necessary that a certain amount of Money should be set aside from the "Gross" measurement of the Value of Output, for meeting -
      - Necessary Expenditure of wear and tear,
      - Deterioration and obsolescence of the Capital Equipment.
   (b) The purpose is to recover the cost of physical deterioration which has taken place in the Capital Equipment while creating Income during a given period. This can only be made by setting aside a certain amount of money every year from the Annual Gross Income, so that when the Income generating Equipment becomes obsolete, a New Capital Equipment may be created out.
   (c) If the Depreciation Allowance is not set aside every year, the flow of Income would not remain intact. It will decline gradually and the whole Country will become poor.
3. Utility: "Net" Measures of National Income is better to evaluate a Nation's Output than "Gross" measures. However, most Economists work only with "dross" measures. This is because Depreciation is not easier to estimate, whereas the Gross Investment can be estimated in a fairly accurate manner. (1 mark)

(B)

	Policy Rate (Repo Rate) (2 marks)	Bank Rate (2 marks)
Meaning	Fixed Repo Rate quoted for Sovereign Securities in the Overnight Segment of LAF is considered as the Policy Rate. (India has many other Repo Rates in operation).	It is the Standard Rate at which RBI is prepared to buy or re-discount Bills of Exchange or other Commercial Paper eligible for purchase under the Act. [RBI Act]
Signi ficance	RBI uses this Rate for balancing Liquidity. Its change gets transmitted through Money Market to the entire Financial System & alters all other Short Term Interest Rates & influences Aggregate Demand - key	Once this rate was used as the Policy Rate in India. Discounting / Re-Discounting of Bills of Exchange by RBI has been discontinued on introduction of LAF. So, it has become dormant as an Instrument of
Change in Rate	If RBI wants to make it more expensive for Banks to borrow Money, it increases the Repo Rate. Similarly, if it wants to make it cheaper for Banks to borrow Money, it reduces the Repo Rate. In other words, an increase in the Repo Rate will lead to	When MSF Rate changes alongside Policy Repo Rate Changes, it also changes automatically. So, MSF assumes the role of Bank Rate and currently the Bank Rate is purely a Signaling Rate & most Interest Rates are delinked from it. Now, it is used only for

Q2 (1 – 5 marks, 2 – 3 marks)

1. **Assumptions:**

(a) There are only two sectors in the economy, with the following roles, viz. –

Household Sector
(i.e. Individuals, Households, Consumers)

- owns all Factors of Production,
- provides Factor Inputs to the Business Sector,
- receive Factor Incomes from Business Sector,
- demands and consumes the Goods and Services produced by the Business Sector.

Business Sector
(i.e. Firms / Producing Entities)

- utilizes Factor Inputs from Household Sector,
- makes Factor Payments to Household Sector,
- produces Goods and Services for meeting the Consumption Demand of Household Sector.

(b) There is **no Government** Sector, hence, – (i) no Corporate or Personal Taxes, (ii) no Transfer Payments.

(c) There is **no Foreign Sector**. Hence, there are – (i) no exports or imports, (ii) no internal inflows/outflows.

(d) All **Investment is autonomous**, i.e. not determined either by the level of Income or Rate of Interest. Hence, Investment Line (I) is **parallel to X–Axis**, i.e. same investment irrespective of Income Levels.

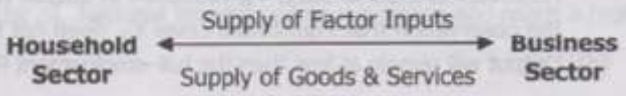
(e) Capital Equipment, Population, Technical Knowledge, Labour Efficiency, Price Levels, etc. remain **constant**.

(f) There are **no injections** into **or leakages** out of, the system.

Note:

- **Injections** refer to inflows / receipts from outside (i.e. Government or Foreign Sectors) into the Household and Business Sectors. (e.g. Govt Purchases from Firms, Transfer Payments to Households, Exports, etc.)
- **Leakages** refer to outflows /payments by Household and Business Sectors to outside the system (i.e. Government or Foreign Sectors) (e.g. Tax Payments, Imports, etc.).

TWO SECTOR MODEL



Note: Refer Assumptions above, for the inter–relationship between these 2 Sectors. The economy is considered "**closed**" as regards Govt / Foreign Sectors.

2. **Equilibrium Level:**

(a) In a Two–Sector Economy with the above assumptions, Total Factor Payments = Income of Household Sector = Total Consumption + Investment Expenditure of Households = Total Receipts by Business Sector = Value of Output.

(b) Aggregate Demand depends on the Household Sector's plans to consume and save.

(c) Aggregate Supply depends on the Producers (i.e. Business Sector's) plans to produce goods and services.

(d) Equilibrium Level of National Income is the point at which –

- Aggregate Supply (i.e. Consumption + Savings) = Aggregate Demand (i.e. Consumption + Investment)
- Thus, C + S = C + I
- Hence, Saving (S) = Investment (I).

Explanation of Equilibrium Level:

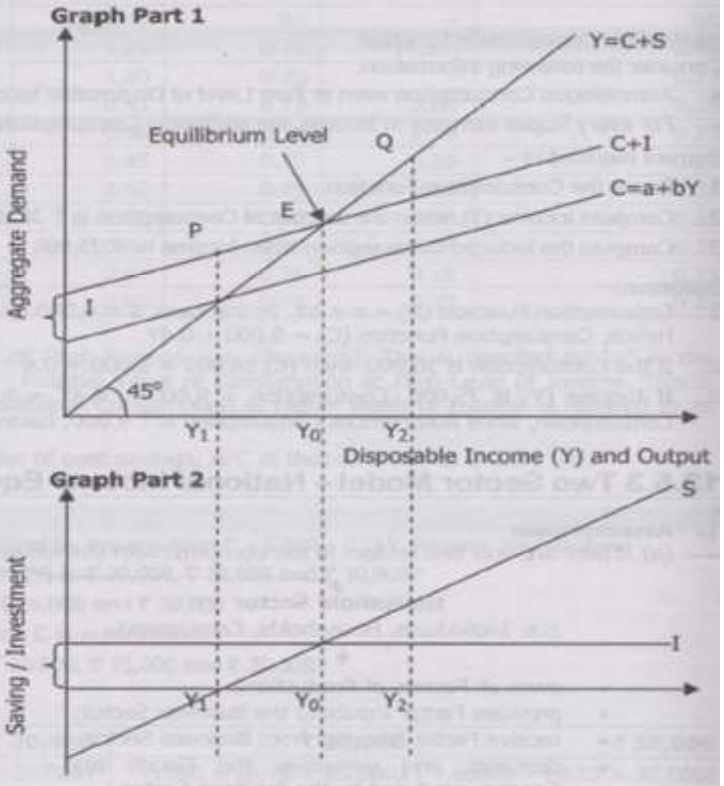
- X Axis represents Disposable Income and Output, in both Parts 1 and 2.
- Y Axis represents Aggregate Demand in Part 1, and represents Saving / Investment in Part 2.
- Income Level Y_0, represents Equilibrium Level of National Income, since at Point E, C+S = C+I.
- Corresponding to that Point in Part 1, at that Income Level Y_0, S = I, in Part 2.

Impact of Point P, i.e. where C+I > C+S:

- At Income Level Y_1, i.e. Point P, C+I > C+S.
- Thus, if I > S (as per Part 2) at this Income Level Y_1, the Aggregate Expenditures (i.e. Demand) exceed Aggregate Output.
- Hence, Business Sector will try to meet the excess demand by expanding production, leading to increase in National Income.
- This will cause a upward movement along the line, to achieve Equilibrium at Point E.

Impact of Point Q, i.e. where C+I < C+S:

- At Income Level Y_2, i.e. Point Q, C+I < C+S.
- Thus, if I < S (as per Part 2) at this Income Level Y_2, the Aggregate Expenditures (i.e. Demand) is less than Aggregate Output.
- Hence, Business Sector will be unable to sell their output, and hence will reduce their output, leading to decrease in National Income.
- This will cause a downward movement along the line, to achieve Equilibrium at Point E.



3. **Impact on Employment:**
   (a) Generally, Increase in National Income would mean Increase in Employment. The larger the National Income, the larger the Employment Level and vice–versa.
   (b) However, the Equilibrium as per Keynesian Theory need not take place at the full–employment level.
   (c) In the above Graph, at Income Level Y_1, Increase in Production will happen only by hiring factors of production. However, at Income Level Y_2, reduction in output will happen by keeping some resources idle, thereby leading to the observation that Equilibrium Level Y_0, need not be the level of full–employment.
   (d) Output will remain at less than the full–employment Rate, as long as there is insufficient spending in the economy.

Q 3 (1 – 2 marks, 2 – 4 marks, 3 – 2 marks)

1. Approach:
   (a) In 1960s, the Money Multiplier Approach to Money Supply was propounded by Milton Friedman and Anna Schwartz,
   (b) This Approach focusses on the relation between the Money Stock and Money Supply in terms of the Monetary Base or High-Powered Money, and the behaviour of - (a) Central Bank, (b) Commercial Banks, and (c) Public.

2. Three Factors: Money Multiplier Approach considers 3 Factors as Determinants of Money Supply, namely –

Factors	Denoted as	Description
(a) Stock of High-Powered Money	H	H (High-Powered Money) represents the behaviour of the Central Bank. Its control over the Issue of Currency is reflected in the Supply of Nominal High-Powered Money. With all other variables unchanged, Total Supply of Nominal Money will vary directly with the Supply of Nominal High-Powered Money.
(b) Ratio of Reserves to Deposits (RDR)	RDR= $\frac{R}{D}$	RDR (Reserves to Deposits Ratio) represents the behaviour of the Commercial Banks, in determining Money Supply through "Credit Money". The behaviour of the Commercial Banks is reflected in the Ratio of their Cash Reserves to Deposits, known as the "Reserve Ratio" (RDR).

(c) Ratio of Currency to Deposits (CDR)	CDR= $\frac{C}{D}$	CDR (Currency to Deposits Ratio) represents the behaviour of the General Public, in determining Money Supply. They influence the Nominal Demand Deposits of the Commercial Banks by their decisions in respect of the amount of Nominal Currency in hand (Money holding as Cash) designated as "Currency Ratio" (CDR).

Note: These Variables are designated as the 'proximate determinants' of the Nominal Money Supply in the Economy.

3. Relationship: So, Money Multiplier Approach recognizes the relationship of Money Supply as

M = m x MB	where M = Money Supply, m = Money Multiplier Ratio, and MB = Monetary Base (or) High Powered Money.

Note: The higher the MB, higher the Money Supply (M).
The lower the Ratios (RDR and CDR), higher the 'm', and hence higher the Money Supply (M).
From the above equation, Money Multiplier (m) = $\frac{\text{Money Suply}}{\text{Monetary Base.}}$

Q 4

(A) Government Intervention to minimise Market Power is generally through Legislation and Regulations, as under -

Competition-based Regulations (2 marks) ↓	Price-based Regulations (2 marks) ↓
Government prevents emergence of monopolies, and related Social Costs (higher prices, lower output, etc.), by 1. promoting competition, 2. Prohibiting contracts, combinations and agreements amongst Firms which are - (a) anti-competitive, (b) in restraint of trade, (c) detrimental to consumers, etc. 3. Ensuring proper use of Intellectual Property Rights, and avoiding their misuse, etc. Example: Competition Law, Patents Law in India.	Price-based Regulations include the following - 1. Setting Maximum Prices that Firms can charge, (e.g. Essential Drugs and similar items), 2. Rate of Return Regulation, in which a Regulatory Authority determines an acceptable price for an item, based on its Costs + Fair Rate of Return (e.g. for Natural Monopolies like Electricity, Gas, Water), 3. Price-Caps based on a Firm's Variable Costs, Past Prices, possible inflation and productivity growth, etc.

(B)

Benefits (2 marks)	Costs (2 marks)
1. Inflow of Foreign Currencies in the form of Interest, Dividends, leading to positive Balance of Payments. 2. Higher Export of Machinery, Equipment, Technology, etc. from the Home Country to Host Country. 3. Increase in the industrial activity of the Home Country - in terms of support to Affiliates/Subsidiaries abroad. 4. Higher Employment Opportunities due to increased industrial activity in the Home Country. 5. Home Country Firms can learn skills from its exposure to the Host Country, and transfer those skills to the Industry in the Home Country.	1. Home Country's Industry and employment position are at stake when the Firms enter Foreign Markets due to low cost labour. 2. Current Account Position of the Home Country suffers, since FDI is a substitute for Direct Exports. 3. Loss of Vertical Integration / Expansion in Home Country itself.—

Q 5

(A) Common Access Resources / Common Pool Resources: (1 mark for each point)

Points	Description
Meaning	These are both Rival and Non-Excludable Goods, generally available free of charge. (a) Rival: Their consumption by one person lessens the benefits available for others. (b) Non-Excludable: People cannot be excluded from using them.
Examples	Forest Resources, Minerals, Oil and Natural Gas Deposits in Nature, Fisheries, Common Pastures, Rivers, Sea, Backwaters, Earth's Atmosphere, Public Roads, Public Parks, etc.
Depletion / Quick	(a) Price Mechanism does not apply to Common Resources. So, Producers and Consumers do not pay for these resources and thus, they may overuse them and cause their depletion and

Degradation	degradation. (b) This creates threat to the sustainability of these resources and, also the availability of common access resources for future generations. (c) This problem of overuse to the disadvantage of the entire world, is described by the term "Tragedy of the Commons".

(B) Fixed Exchange Rate Regime:

Points	Description
Concept (2 marks)	(a) The Country's Central Bank and/ or Government announces or decrees the FX Rate, i.e. what its currency will be worth in terms of - (i) either another country's currency, or (ii) a basket of currencies, or (iii) another measure of value, e.g. Gold. [Note: Such item is called "External Standard".] (b) When a Government intervenes in the Forex Market so that the Exchange Rate of its currency is different from what would have been determined by the free flow of market forces, it is said to have established a "peg" for its currency. (c) To maintain the FX Rate at that announced level (called "Parity Value"), the Central Bank and/ or Government also regularly operates in the market by buying (or selling) Foreign Reserves whenever the market demand for Foreign Currency is lesser (or greater) than the supply of Foreign Currency.
Merits (1 mark)	(a) Ensures stability and increase in Foreign Trade and Capital movements. (b) Avoids Currency Fluctuations and eliminates Exchange Rate Risks and Transaction Costs that can impede international flow of trade and investments. (c) Imposes discipline on a Country's Central Bank and/or Govt, and thereby generates lower levels of inflation. (d) Enhances the credibility of the Country's Monetary Policy.
Demerits (1 mark)	(a) The Central Bank and/or Government has to maintain large reserves of Foreign Currencies, to maintain the Exchange Rate at the level fixed by it. (b) Market Forces of Demand and Supply have no role in the determination of Equilibrium FX Rate.

Q 6

(A)

	Depreciation (2 marks)	Devaluation (2 marks)
(a) Meaning	Depreciation is a decrease in a Currency's Value (relative to another currency) due to market forces in a Floating Exchange Rate Regime.	Devaluation is a deliberate downward adjustment in the value of a Country's currency relative to another currency, group of currencies or standard.
(b) Cause	Depreciation is caused due to increase in Demand, with Supply remaining constant.	Devaluation is caused by the action of the Government / Central Bank / Monetary Authority policy actions.
(c)Regime	Applicable for a Floating Exchange Rate Regime.	Applicable for a relatively Fixed Exchange Rate Regime.
(d)Scope	It is due to the interaction of market forces.	It is a monetary policy tool to make an official reduction in the par value of a currency.

Note: The terms "Appreciation" and "Revaluation" are used to denote the opposite of the above two terms "Depreciation" and "Devaluation" respectively.

(B)

Point	Description

Meaning (2 marks)	1. Government Borrowings from Public (and its repayment) are covered in this concept. 2. Public Debt may be - (a) Internal - i.e. borrowing from its own people in the country, or (b) External - i.e. borrowing from outside sources. 3. Public Debt may be by way of - a) Market Loans - issue of Treasury Bills (T-Bills) and Government Securities (G-Secs) which are actively traded in Debt Markets, [Note: Capital Bonds = Long-Term, and T-Bills = Short-Term] b) Small Savings - non-negotiable and non-transferable Public Borrowings under various schemes - e.g. Public Provident Fund, National Savings Certificates, Kisan Vikas Patra, Sukanya Samriddhi, etc.
Action during Recession (1 mark)	1. Government reduces its Borrowings (e.g. closure of certain schemes, non-acceptance of fresh deposits), and also repays existing Public Debt. 2. Such action increases the availability of money in the economy and increases Aggregate Demand.
Action during Inflation (1 mark)	1. Government increases its Borrowings (e.g. offering new schemes, acceptance of fresh deposits etc.), and also at attractive rates of interest. — 2. Such action wipes out the excess purchasing power in the economy, reducing demand-pull inflation.