

SUGGESTED SOLUTION

INTERMEDIATE N'19 EXAM

SUBJECT- F.M. AND ECONOMICS

Test Code - PIN 5053

BRANCH - () (Date:)

Head Office : Shraddha, 3rd Floor, Near Chinai College, Andheri (E), Mumbai – 69.

Tel: (022) 26836666

ANSWER-1

ANSWER-A

Workings:

(i) Cost of Equity (K) =
$$\frac{D_1}{P_0} + g$$

= $\frac{Rs.3}{Rs.30} + 0.07$
= 0.1 + 0.07
= 0.17 = 17%

(ii) Cost of Debentures $(K_d) = I(1 - t) = 0.09(1 - 0.4) = 0.054$ or 5.4%

Computation of Weighted Average Cost of Capital (WACC using market value weights)

Source of capital	Market Value of capital (Rs.)	Weig ht	Cost of capital (%)	WACC (%)
9% Debentures	30,00,000	0.30	5.40	1.62
12% Preference Shares	10,00,000	0.10	12.00	1.20
Equity Share Capital	60,00,000	0.60	17.00	10.20
(Rs.30 × 2,00,000 shares)				
Total	1,00,00,000	1.00		13.02

(5 MARKS)

ANSWER-B

Preparation of Balance Sheet Working Notes:

Sales = Gross Profit / Gross Profit Margin

= 60,000 / 0.2 = Rs. 3,00,000

Total Assets = Sales / Total Asset Turnover

= 3,00,000 / 0.3 = Rs.10,00,000

Net Worth = 0.9 X Total Assets

= 0.9 X Rs. 10,00,000 = Rs. 9,00,000

Current Liability = Total Assets – Net Worth

= Rs. 10,00,000 - Rs. 9,00,000

= Rs. 1,00,000

Current Assets = 1.5 x Current Liability

= 1.5 x Rs. 1,00,000 = Rs. 1,50,000

Stock = Current Assets – Liquid Assets

= Current Assets - (Liquid Assets / Current Liabilities =1)

= 1,50,000 - (LA / 1,00,000 = 1) = Rs. 50,000

Debtors = Average Collection Period X Credit Sales / 360

 $= 60 \times 0.8 \times 3,00,000 / 360 = Rs. 40,000$

Cash = Current Assets – Debtors – Stock

= Rs. 1,50,000 - Rs. 40,000 - Rs. 50,000

=Rs. 60,000

Fixed Assets = Total Assets - Current Assets

= Rs. 10,00,000 - Rs. 1,50,000

= Rs. 8,50,000

Balance Sheet

Liabilities	Rs.	Assets	Rs.
Net Worth	9,00,000	Fixed	8,50,000
Current	1,00,000	Assets	50,000
Liabilities	1,00,000	Stock	30,000
		Debtors	40,000
		Cash	60,000
Total liabilities	10,00,000	Total Assets	10,00,000

(5 MARKS)

ANSWER-C

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

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

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%	$\frac{5 + {0.15 \choose 0.10} (10 - 5)}{0.10}$	$\frac{7.5 + \binom{0.15}{0.10} (10 - 7.5)}{0.10}$	$\frac{10 + \binom{0.15}{0.10} (10 - 10)}{0.10}$ $= \frac{10}{0.10} = \text{Rs. } 100$
		$=\frac{12.5}{0.10}=\text{Rs. }125$	$= \frac{11.25}{0.10} = \text{Rs. } 112.5$	0.10
(b)	10%	$\frac{5 + {0.10 \choose 0.10} (10 - 5)}{0.10}$	$\frac{7.5 + \binom{0.10}{0.10}(10 - 7.5)}{0.10}$	$\frac{10 + \binom{0.10}{0.10}(10 - 10)}{0.10}$
		$=\frac{10}{0.10}$ = Rs. 100	$= = \frac{10}{0.10} = \text{Rs. } 100$	$=\frac{10}{0.10}$ = Rs. 100
(c)	5%	$\frac{5 + \left(\frac{0.05}{0.10}\right)(10 - 5)}{0.10}$	$\frac{7.5 + {\binom{0.05}{0.10}} (10 - 7.5)}{0.10}$	$= \frac{\frac{10}{0.10}}{\frac{10 + \left(\frac{0.05}{0.10}\right)(10 - 10)}{0.10}}$
		$=\frac{7.5}{0.10}$ = Rs. 75	$=\frac{8.75}{0.10}$ = Rs. 87.5	$=\frac{10}{0.10}$ = Rs. 100

(5 MARKS)

ANSWER-D

Computation of Earnings Per Share (EPS)

Plans	I (Rs.)	II (Rs.)
Earnings before interest & tax (EBIT)	40,00,000	40,00,000
Less: Interest charges (12% of Rs.75 lakh)		(9,00,000)
Earnings before tax (EBT)	40,00,000	31,00,000
Less: Tax @ 30%	(12,00,000)	(9,30,000)

Earnings after tax (EAT)	28,00,000	21,70,000
No. of equity shares (@ Rs.10+Rs.15)	4,00,000	1,00,000
E.P.S (Rs.)	7.00	21.70

(ii) Computation of Financial Break-even Points

Plan 'I' = 0 – Under this plan there is no interest payment, hence the financial break- even point will be zero.

Plan 'II' = Rs. 9,00,000 - Under this plan there is an interest payment of Rs.9,00,000, hence the financial break -even point will be Rs.9 lakhs

(iii) Computation of Indifference Point between Plan I and Plan II:

Indifference point is a point where EBIT of Plan-I and Plan-II are equal. This can be calculated by applying the following formula:

$$\{(EBIT - I_1) (1-T)\} / E_1 = \{(EBIT - I_2) (1-T)\} / E_2$$

So $\frac{\text{EBIT}(1-0.3)}{}$

400000 shares

$$=\frac{(EBIT-Rs.900000)(1-0.3)}{100000\,shares}$$

Or,
$$2.1EBIT = 25,20,000$$

(5 MARKS)

ANSWER-2

Working Notes:

Depreciation on Machine X =
$$\frac{1,50,000}{5}$$
 = Rs.30,000

Depreciation on Machine Y =
$$\frac{2,40,000}{6}$$
 = Rs.40,000

Particulars	Machine X (Rs.)	Machine Y (Rs.)
Annual Savings:		
Wages	90,000	1,20,000
Scrap	10,000	15,000

Total Savings (A)	1,00,000	1,35,000
Annual Estimated Cash Cost:		
Indirect Material	6,000	8,000
Supervision	12,000	16,000
Maintenance	7,000	11,000
Total Cash Cost (B)	25,000	35,000
Annual Cash Savings (A-B)	75,000	1,00,000
Less : Depreciation	30,000	40,000
Annual Savings Before Tax	45,000	60,000
Less : Tax @ 30%	13,500	18,000
Annual Savings/Profit (After Tax)	31,500	42,000
Add : Depreciation	30,000	40,000
Annual Cash Inflows	61,500	82,000

(5 MARKS)

Evaluation of Alternatives

(2.5*2 = 5 MARKS)

(i) Average Rate of Return Method (ARR)

$$ARR = \frac{Average Annual Net Savings}{Average Investment}$$

Machine X =
$$\frac{31,500}{75,000}$$
 x $100 = 42\%$

Machine Y =
$$\frac{42,000}{1,20,000}$$
 x $100 = 35\%$

Decision: Machine X is better.

[Note: ARR can be computed alternatively taking initial investment as the basis for computation (ARR = Average Annual Net Income/Initial Investment). The value of ARR for Machines X and Y would then change accordingly as 21% and 17.5% respectively]

(ii) Present Value Index Method

Present Value of Cash Inflow = Annual Cash Inflow x P.V. Factor @ 10%

Machine X = $61,500 \times 3.79$

= Rs. 2,33,085

Machine Y = $82,000 \times 4.354$

= Rs. 3,57,028

P.V. Index = $\frac{\text{Present Value}}{\text{Investment}}$

Machine X =
$$\frac{2,33,085}{1,50,000} = 1.5539$$

Machine Y
$$= \frac{3,57,028}{2,40,000} = 1.4876$$

Decision: Machine X is better.

ANSWER-3

(i) Statement showing Working Capital for each policy

(Rs. 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) –	2.16	1.56	0.26	
(iv)				
(b) Rate of return : (vii)/(iii)	17.3%	17.7%	19.2%	
(c) Current ratio (i)/(iv)	1.92	1.67	1.11	

(4 MARKS)

(ii) Statement Showing Effect of Alternative Financing Policy

(Rs.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	0.12	0.18

	(12% of Rs.	(12% of Rs.	12% of Rs.
	0.54)	1.00)	1.50)
Long term debt : (x)	0.18	0.11	0.03
	(16% of Rs.	(16% of Rs.	(16% of Rs.
	1.12)	0.66)	0.16)
Earning before tax :	0.91	0.92	0.94
(xi) - (ix + x)			
Tax @ 35%	(0.32)	(0.32)	(0.33)
Earning after tax : (xii)	0.59	0.60	0.61
(a) Net Working Capital Position : (i) –	1.02	0.56	0.06
[(iv) + (v)]			
(b) Rate of return on Equity	23.6%	24%	24.4%
shareholders' capital : (xii)/(vii)			
(c) Current Ratio :	1.35	1.17	1.02
[(i) /(iv) + (v)]			

(6 MARKS)

ANSWER-4

(i) Financial leverage

(1.5 MARKS)

Combined Leverage = Operating Leverage (OL) x Financial Leverage (FL)

$$2.5 = 2 \times FL Or, FL = 1.25$$

Financial Leverage = 1.25

(ii) P/V Ratio and Earning per share (EPS)

(5 MARKS)

Operating leverage =
$$\frac{\text{Contribution (C)}}{\text{Contribution - Fixed Cost (FC)}} \times 100$$

$$2 = \frac{C}{C - 3,40,000}$$
 Or, $C = 2 (C - 3,40,000)$

Or, C = 2C - 6,80,000 Or, Contribution = Rs.6,80,000

Now, P/V ratio =
$$\frac{\text{Contribution (C)}}{\text{Sales(S)}} \times 100 = \frac{6,80,000}{50,00,000} \times 100 = 13.6\%$$

Therefore, P/V Ratio = 13.6%

EBT = Sales - Variable Cost - Fixed Cost - Interest

$$= Rs.98,000$$

EPS =
$$\frac{\text{Profit after tax}}{\text{No. of equity shares}}$$

EPS =
$$\frac{Rs.68,600}{3,40,000 \text{ shares}} = Rs.0.202$$

(iii) Assets turnover

(2 MARKS)

Assets turnover =
$$\frac{\text{Sales}}{\text{Total Assets}^*} = \frac{\text{Rs.50,00,000}}{\text{Rs.34,00,000} + \text{Rs.30,25,000}} = 0.78$$

0.78 < 1.5 means lower than industry turnover.

*Total Asset = Equity share capital + 8% Debentures

(iv) EBT zero means 100% reduction in EBT. Since combined leverage is 2.5, sales have to be dropped by 100/2.5 = 40%. Hence new sales will be

Rs.
$$50,00,000 \times (100-40) \% = Rs. 30,00,000$$
.

Therefore, at Rs. 30,00,000 level of sales, the Earnings before Tax (EBT) of the company will be zero.

(1.5 MARKS)

Alternatively

Required sales when EBT is zero

$$= \frac{\text{Fixed Cost} + \text{Interest} + \text{desired Profit}}{\text{P/V Ratio}}$$

$$=\frac{Rs.3,40,000+Rs.2,42,000+Zero}{13.60\%}$$

$$=\frac{Rs.5,82,000}{13.60\%}$$

[Note: The question can also be solved by first calculating EBIT with the help of Financial Leverage. Accordingly answer to the requirement (ii) and (iv) will also vary]

ANSWER-5

- (i) Equipment's initial cost = Rs. 6,00,000 + 80,000 = Rs. 6,80,000
- (ii) Annual straight line depreciation = Rs. 6,00,000/5 = Rs.1,20,000
- (iii) Net cash flows can be calculated as follows:
 - = Before tax CFs \times (1 Tc) + Tc \times Depreciation

(0.5 *3 = 1.5 MARKS)

		(Rs. '000)							
			CFs						
	Year	0	1	2	3	4	5		
1.	Initial cost	(680)							
2.	Before tax CFs		240	275	210	180	160		
3.	Tax @ 35%		<u>84</u>	<u>96.25</u>	<u>73.5</u>	<u>63</u>	<u>56</u>		
4.	After tax-CFs		156	178.75	136.5	117	104		
5.	Depreciation tax shield								
	(Depreciation × Tc)		42	42	42	42	42		
6.	Working capital released		_		_		<u>80</u>		
7.	Net Cash Flow (4 + 5 + 6)		198	220.75	178.5	159	226		
8.	PVF at 12%	1.00	0. 8929	0.7972	0.7118	0.6355	0.5674		
9.	PV (7 × 8)	(680)	176.79	175.98	127.06	101.04	128.23		
10.	NPV	29.12							

	0	1	2	3	4	5
PVF at 15%	1	0.8696	0.7561	0.6575	0.5718	0.4972
PV	(680)	172.18	166.91	117.36	90.92	112.37
NPV	-20.26					

(6.5 MARKS)

Internal Rate of Return

(2*1 = 2 MARKS)

IRR = 12% +
$$\frac{29.12}{49.38}$$
 × 3%

Discounted Payback Period

Discounted CFs at K = 12% considered = 176.79 + 175.98 + 127.06 + 101.04 + 12 $\times \frac{99.13}{128.24}$

= 4 years and 9.28 months

Payback Period (NCFs are considered)

=
$$198 + 220.75 + 178.5 + 12 \times \frac{82.75}{159}$$

= 3 years and 6.25 months

ANSWER-6

ANSWER-A

On one hand when cost of 'fixed cost fund' is less than the return on investment financial leverage will help to increase return on equity and EPS. The firm will also benefit from the saving of tax on interest on debts etc. However, when cost of debt will be more than the return it will affect return of equity and EPS unfavourably and as a result firm can be under financial distress. This is why financial leverage is known as "double edged sword".

Effect on EPS and ROE:

When, ROI > Interest – Favourable – Advantage When, ROI < Interest – Unfavourable – Disadvantage

When, ROI = Interest – Neutral – Neither advantage nor disadvantage.

(5 MARKS)

ANSWER-B

The profit maximization is not an operationally feasible criterion." This statement is true because profit maximization can be a short-term objective for any organization 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) <u>Vague term:</u> 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) <u>Timing of Return:</u> 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.

(5 MARKS)

ANSWER:7

(A)

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

 $Y = 0.75 \times \{(1 - 0.30)^*Y\} + 250 + 800 + 600 - 0.15 \times Y$
 $Y = 0.375 Y + 1650$
 $0.625Y = 1650$
 $Y = \frac{1650}{0.625}$

Hence Y = Rs. 2640 Crores

- (ii) Exports (X) = Rs. 600 Crores

 Imports = 0.15 (2640) = Rs. 396 Crores

 Hence current account is in surplus of Rs. 204 Crores
- (iii) Tax revenue = 0.3 (2640) = Rs. 792 Crores

 Government expenditure = Rs. 800 Crores

 Hence budget is in deficit of Rs. 8 crores i.e. 8

(5 MARKS)

(B)

- <u>Meaning</u>: Disposable Income is the Income which is left with the Individuals after paying Taxes to the Government.
- <u>Computation</u>: Disposable Income can be computed in any one of the following way (a) Disposable Income = Personal Income (-) Personal Income Taxes.

(2 Marks)

- 1. Regulations: through regulations, the government can-
 - (a) Determine how a private activity may be conducted e.g. 10+ 2 pattern of education , board exams,
 - (b) Prohibit some types of goods and activities e.g. narcotic substances, smuggling,
 - (c) Set standards and issue mandates making others oblige e.g. use of helmets , insurance coverage,
 - (d) Enhance consumption of merit goods i.e consumption of what is socially desirable;
 - (e) Ensure the quality of merit goods supplied to the society
- 2. Subsidies: merit goods may be provided free of cost (100% subsidy) or at subsidized rates, to enhance their consumption.
- 3. Direct government provision: Government produces merit goods, leading to large economies of scale and productive efficiency apart from generating substantial positive externalities.
- 4. Supplementing market provision: government can increase the consumption of merit goods by purchasing them from the open market, and supplying them free or at subsidized rates to the consumers.

(3 MARKS)

ANSWER:8

(A) NDFC = Compensation of Employees + Operating Surplus + Mixed Income
$$= (viii) + (ix) + (vi) + (v) + (vi) + (vii) = 489 + 50 + 311 + 892 + 81 + 6 = 1829 \text{ Crores}$$

$$\text{GDP}_{\text{MP}} = \text{NDP}_{\text{FC}} + \text{Depreciation} + \text{Net Indirect Tax}$$

$$= \text{NDP}_{\text{FC}} + (ii) + (i) = 1829 + 42 + 208 = 2079 \text{ Crores}$$

$$\text{NNP}_{\text{FC}} = \text{NDP}_{\text{FC}} + \text{Net Factor Income from Abroad}$$

$$= \text{NDP}_{\text{FC}} + (iii) = 2079 + (-40) = 2039 \text{ Crores}$$

(3 MARKS)

(B)

	Liquidity Adjustment Facility (LAF)	Marginal Standing Facility (MSF)
Central	RBI, being a Bankers' Bank, provides	RBI, being a Bankers' Bank, acts as a
Bank's Role	Liquidity to Banks when it faces	Lender of Last Resort to
	shortage of Liquidity.	Commercial Banks, in suitable
		situations.
Objective	Its objective is to assist Banks to adjust	It has been introduced by RBI with
	their day to day mismatches in	the main aim to
	Liquidity. Currently, RBI provides	a) reduce Volatility in the
	Financial Accommodation to the	Overnight Lending Rates in the
	Commercial Banks through Repos /	Inter – Bank Market, and
	Reverse Repos under this Facility.	b) enable smooth Monetary
		Transmission.

(3 MARKS)

(C) <u>Voluntary Export Restraints (VERs) refer to a type of informal quota administered by an exporting country voluntarily restraining the quantity of goods that can be exported out of a country during a specified period of time.</u>

(2 MARKS)

(D) The 'real exchange rate' incorporates changes in prices and describes 'how many' of a good or service in one country can be traded for 'one' of that good or service in a foreign country.

Real exchange rate = Nominal exchange rate $\times \frac{Domestic\ price\ Index}{Foreign\ price\ Index}$

(2 MARKS)

ANSWER:9

(A) The ratio of ΔY to ΔI is called the investment multiplier, k.

$$k = \frac{Change\ Income}{change\ in\ Investment} \frac{\Delta Y}{\Delta I}$$

Here
$$\frac{2400}{600}$$
 = 4; 4 = $\frac{1}{1-MPC}$ = $\frac{1}{MPS}$
4 - 4MPC = 1
4 MPC = 4 - 1 = 3
MPC = $\frac{3}{4}$ = 0.75
MPS = 1 - MPC = 0.25

(2 MARKS)

(B)

- (a) This need reflects people's desire to hold cash, in order to be equipped to exploit any attractive investment opportunity requiring cash expenditure, i.e. to take advantage of favourable business situations.
- (b) It means the proportion of cash in asset portfolio in response to the changes interest rate.
- (c) Higher the interest rate, lower the speculative demand for money and vice-versa.

(3 MARKS)

(C)

- 1. Arbitrage refers to the <u>practice of making risk less profits</u> by intelligently exploiting price differences of an Asset at different dealing locations.
- 2. When price differences occur in different markets, Market Participants will purchase the Asset in a low priced market, for re sale in a high priced market and make profit in this process.
- 3. Due to the operation of Price Mechanism, the price is driven up in the low priced market and pushed down in the high priced market.

- 4. This activity will continue until the prices in the two markets are equalized, or until they differ only by the amount of Transaction Costs involved in the operation.
- 5. There is potential for arbitrage in the Forex Market if exchange rates are not consistent between currencies. However, since Forex Markets are highly integrated and efficient, any Profit spread on a given currency is quickly arbitrated away.

(3 MARKS)

(D) 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. Pump priming 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.

(2 MARKS)

ANSWER: 10

- (A) <u>Restrictions / Barriers</u>: However, Government intervention in restricting free flow of goods and services is found in many forms in the practical world, which takes the form of Trade Barriers. The main purposes of imposing Trade Barriers are -
 - (a) To protect Domestic Industries from Foreign competition,
 - (b) to conserve the Foreign Exchange Resources of the Country,
 - (c) To make the Balance of Payments Position favourable.
 - (d) To curb Conspicuous Consumption,
 - (e) To mobilise Revenue for the government and,
 - (f) To discriminate against certain countries.

Note: Depending on the economic situation, Trade Barriers may be oriented towards -

- (a) promoting exports, and restricting imports, [general situation] or
- **(b)** promoting imports, and restricting exports [in certain goods, and in certain situations]

(5 MARKS)

(B) The main forms of direct investments are: the opening of overseas companies, including the establishment of subsidiaries or branches, creation of joint ventures on a contract basis, joint development of natural resources and purchase or annexation of companies in the country receiving foreign capital. (2 MARKS)

(C) Meaning: 'Crowding out' effect is the negative effect fiscal policy may generate when spending by government in an economy substitutes private spending. For example, if government provides free computers to students, the demand from students for computers may not be forthcoming.

Mechanism

The interest rates in an economy increase when:

Government increases its spending by borrowing from the loanable funds from market and thus the demand for loans increases.

Government increases the budget deficit by selling bonds or treasury bills and the amount of money with the private sector decreases.

Due to high interest, private investments, especially the ones which are interest – sensitive, will be reduced. Fiscal policy becomes ineffective as the decline in private spending partially or completely offset the expansion in demand resulting from an increase in government expenditure. (3 MARKS)

ANSWER:11

(A)

- 1. CDR Concept: CDR is ratio of money held by the Public held in Currency, to that they hold in Demand Deposits with Banks. So, $CDR = \frac{Currency\ held\ by\ Public}{Demand\ Deposits\ in\ Banks} = \frac{C}{D}$. Suppose CDR is 0.2, it means for every Rs. 100, an Individual with hold Rs. 20 as Currency with him, and place Rs. 80 in Commercial Banks as Demand Deposits.
- 2. **Significance**: CDR
 - (a) represents the degree of adoption of banking habits by the people, and is thus a behavioural parameter,
 - (b) reflects People's preference for liquidity
 - (c) is related to the level of economic activities or the GDP Growth,
 - (d) is influenced by the degree of financial sophistication, e.g. (i) ease and access to Financial Services, (ii) availability of a number of Liquid Financial Assets, (iii) Financial Innovations, (iv) Institutional Factors, etc.
 - (e) is driven by temporary factors also, e.g. CDR may increase during festive seasons as People convert Deposits into Cash for meeting extra expenditure during that periods.
- 3. Impact: Increase in the Monetary Base that goes into
 - (a) Currency is not multiplied
 - (b) Demand Deposits is multiplied (by the Banking System, subject to Reserve Requirements.)

(5 MARKS)

(B) Moral hazard is associated with information failure and refers to a situation that increases the probability of occurrence of a loss or a larger than normal loss, because of a change in the unobservable or hard to observe behaviour of one of the parties in the transaction after the transaction has been made. Moral hazard is **opportunism**

characterized by an informed person's taking advantage of a less-informed person through an unobserved action. It arises from lack of information about someone's future behaviour. Moral hazard occurs due to asymmetric information i.e., an individual knows more about his or her own actions than other people do. This leads to a distortion of incentives to take care or to exert effort when someone else bears the costs of the lack of care or effort. For example, in the insurance market, the expected loss from an adverse event increases as insurance coverage increases.

(2 MARKS)

(C) <u>Depreciation vs. Devaluation :</u>

	Depreciation	Devaluation
Meaning	Depreciation is a <u>decrease in a</u>	Devaluation is a deliberate downward
	Currency's Value (relative to	adjustment in the value of a Country's
	another currency) due to market	currency relative to another currency,
	forces in a Floating Exchange Rate	group of currencies or standard.
	Regime.	
<u>Cause</u>	Depreciation is caused due to	Devaluation is caused by the action of
	increase in Demand, with Supply	the Government / Central Bank/
	remaining constant.	Monetary authority policy actions.
Regime	Applicable for a Floating Exchange	Applicable for a relatively fixed
	Rate Regime.	exchange rate regime
<u>Scope</u>	It is due to the interaction of market	It is a monetary policy tool to make an
	forces.	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.

(3 MARKS)