SECTION – A: FINANCIAL MANAGEMENT

*Question No. **1** is compulsory.*

*Attempt any **four** questions out of the remaining **five** questions.*

In case, any candidate answers extra question(s)/ sub-question(s) over and above the required number, then only the requisite number of questions first answered in the answer book shall be valued and subsequent extra question(s) answered shall be ignored.

Working notes should form part of the answer

Question 1

(a) From the following information, complete the Balance Sheet given below:

(i)	Equity Share Capital	:	₹ 2,00,000
(ii)	Total debt to owner's equity	:	0.75
(iii)	Total Assets turnover	:	2 times
(iv)	Inventory turnover	:	8 times
(v)	Fixed Assets to owner's equity :		0.60
(vi)	Current debt to total debt	:	0.40

Balance Sheet of XYZ Co. as on March 31, 2020

Liabilities	Amount (₹)	Assets	Amount (₹)
Equity Shares Capital	2,00,000	Fixed Assets	?
Long term Debt	?	Current Assets:	
Current Debt	?	Inventory	?
		Cash	?

(5 Marks)

(b) The following information is taken from ABC Ltd.

Net Profit for the year	₹ 30,00,000
12% Preference share capital	₹ 1,00,00,000
Equity share capital (Share of ₹ 10 each)	₹ 60,00,000
Internal rate of return on investment	22%
Cost of Equity Capital	18%
Retention Ratio	75%

Calculate the market price of the share using:

(1)   Gordon's Model

(2)   Walter's Model   **(5 Marks)**

(c)   *A project requires an initial outlay of ₹ 3,00,000.*

The company uses certainty equivalent method approach to evaluate the project. The risk free rate is 7%.

Following information is available:

Year	CFAT (Cash Flow After Tax) ₹	CE (Certainty Equivalent Coefficient)
1.	1,00,000	0.90
2.	1,50,000	0.80
3.	1,15,000	0.60
4.	1,00,000	0.55
5.	50,000	0.50

PV Factor at 7%

Year	1	2	3	4	5
PV Factor	0.935	0.873	0.816	0.763	0.713

Evaluate the above. Is investment in the project beneficial?   **(5 Marks)**

(d)   *The following information is provided by MNP Ltd. for the year ending 31st March, 2020:*

Raw Material Storage period	*45 days*
Work-in-Progress conversion period	*20 days*
Finished Goods storage period	*25 days*
Debt Collection period	*30 days*
Creditors payment period	*60 days*
Annual Operating Cost	*₹ 25,00,000*

(Including Depreciation of ₹ 2,50,000)

Assume 360 days in a year.

You are required to calculate:

(i)   Operating Cycle period

(ii)   Number of Operating Cycle in a year.

(iii)   Amount of working capital required for the company on a cost basis.

(iv) *The company is a market leader in its product and it has no competitor in the market. Based on a market survey it is planning to discontinue sales on credit and deliver products based on pre-payments in order to reduce its working capital requirement substantially. You are required to compute the reduction in working capital requirement in such a scenario.*   **(5 Marks)**

Answer

(a) **Balance Sheet of XYZ Co. as on March 31, 2020**

Liabilities	Amount (₹)	Assets	Amount (₹)
Equity Share Capital	2,00,000	Fixed Assets	1,20,000
Long-term Debt	90,000	**Current Assets:**	
Current Debt	60,000	Inventory	87,500
		Cash (balancing figure)	1,42,500
	3,50,000		**3,50,000**

Working Notes

1. Total Debt = 0.75 x Equity Share Capital = 0.75 x ₹ 2,00,000 = ₹ 1,50,000

   Further, Current Debt to Total Debt = 0.40.

   So, Current Debt = 0.40 x ₹ 1,50,000   = ₹ 60,000

   Long term Debt   = ₹ 1,50,000 - ₹ 60,000   = ₹ 90,000

2. Fixed Assets = 0.60 x Equity Share Capital = 0.60 x ₹ 2,00,000 = ₹ 1,20,000

3. Total Assets to Turnover = 2 times; Inventory Turnover = 8 times

   Hence, Inventory /Total Assets = 2/8 =1/4

   Further, Total Assets = ₹ 2,00,000 + ₹ 1,50,000 = ₹ 3,50,000

   Therefore, Inventory = ₹ 3,50,000/4   = ₹ 87,500

   Cash in Hand = Total Assets – Fixed Assets – Inventory

                 = ₹ 3,50,000 - ₹ 1,20,000 - ₹ 87,500 = ₹ 1,42,500

(b) Market price per share by-

(1) **Gordon's Model:**

Present market price per share $(P_o)^* = \dfrac{D_o(1+g)}{K_e - g}$

OR

Present market price per share $(P_0) = \dfrac{D_1}{K_e - g}$

Where,

P_0 = Present market price per share.

g = Growth rate (br) = 0.75 X 0.22 = 0.165

b = Retention ratio (i.e., % of earnings retained)

r = Internal rate of return (IRR)

D_0 = E x (1 – b) = 3 X (1 – 0.75) = 0.75

E = Earnings per share

$P_0 = \dfrac{0.75\,(1 + 0.165)}{0.18 - 0.165} = \dfrac{0.874}{0.015} =$ ₹ **58.27 approx.**

*Alternatively, P_0 can be calculated as $\dfrac{E(1 - b)}{k - br} =$ ₹ 50.

(2) Walter's Model:

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

$$= \dfrac{0.75 + \dfrac{0.22}{0.18}\,(3 - 0.75)}{0.18} = ₹\ \textbf{19.44}$$

Workings:

1. Calculation of Earnings per share

Particulars	Amount (₹)
Net Profit for the year	30,00,000
Less: Preference dividend (12% of ₹ 1,00,00,000)	(12,00,000)
Earnings for equity shareholders	18,00,000
No. of equity shares (₹ 60,00,000/₹10)	6,00,000
Therefore, Earnings per share $\left(\dfrac{\text{Earning for equity shareholders}}{\text{No. of equity shares}}\right)$	₹ 18,00,000/6,00,000 = ₹ **3.00**

2. Calculation of Dividend per share

Particulars	
Earnings per share	₹ 3
Retention Ratio (b)	75%
Dividend pay-out ratio (1-b)	25%
Dividend per share (Earnings per share x Dividend pay-out ratio)	₹ 3 x 0.25 = ₹ 0.75

(c) Statement Showing the Net Present Value of Project

Year end	CFAT (₹) (a)	C.E. (b)	Adjusted Cash flow (₹) (c) = (a) × (b)	Present value factor @ 7% (d)	Total Present value (₹) (e) = (c) × (d)
1	1,00,000	0.90	90,000	0.935	84,150
2	1,50,000	0.80	1,20,000	0.873	1,04,760
3	1,15,000	0.60	69,000	0.816	56,304
4	1,00,000	0.55	55,000	0.763	41,965
5	50,000	0.50	25,000	0.713	17,825
PV of Cash Inflow					3,05,004
Less: Initial Investment					(3,00,000)
Net Present Value					**5,004**

Since the NPV of the project is positive, it is beneficial to invest in the project.

(d) (i) Calculation of Operating Cycle Period:

Operating Cycle Period = R + W + F + D – C

= 45 + 20 + 25 + 30 – 60 = **60 days**

(ii) Number of Operating Cycle in a Year

$$= \frac{360}{\text{Operating cycle period}} = \frac{360}{60} = \textbf{6}$$

(iii) Amount of Working Capital Required

$$= \frac{\text{Annual operating cost}}{\text{Number of operating cycl}} = \frac{₹\,25,00,000 - ₹\,2,50,000}{6}$$

$$= \frac{₹\,22,50,000}{6} = ₹\,\textbf{3,75,000}$$

(iv) Reduction in Working Capital

Operating Cycle Period   = R + W + F – C

= 45 + 20 + 25 – 60 = **30 days**

Amount of Working Capital Required = $\dfrac{₹\,22,50,000}{360}$ x 30   = ₹ 1,87,500

Reduction in Working Capital   = ₹ 3,75,000 – ₹ 1,87,500 = ₹ **1,87,500**

Note: If we use Total Cost basis, then amount of Working Capital required will be ₹ 4,16,666.67 (approx.) and Reduction in Working Capital will be ₹ 2,08,333.33 (approx.)

Question 2

The information related to XYZ Company Ltd. for the year ended 31ˢᵗ March, 2020 are as follows:

Equity Share Capital of ₹ 100 each	*₹ 50 Lakhs*
12% Bonds of ₹ 1000 each	*₹ 30 Lakhs*
Sales	*₹ 84 Lakhs*
Fixed Cost (Excluding Interest)	*₹ 7.5 Lakhs*
Financial Leverage	*1.39*
Profit-Volume Ratio	*25%*
Market Price per Equity Share	*₹ 200*
Income Tax Rate Applicable	*30%*

You are required to compute the following:

(i)   Operating Leverage

(ii)   Combined Leverage

(iii) Earning per share

(iv) Earning Yield   *(10 Marks)*

Answer

Workings:

1.   Profit Volume Ratio $= \dfrac{\text{Contribution}}{\text{Sales}}$ x 100

So,   25 $= \dfrac{\text{Contribution}}{₹\,84,00,000}$ x 100

Contribution $= \dfrac{₹\,84,00,000 \times 25}{100} = ₹\,21,00,000$

2.   Financial leverage $= \dfrac{\text{EBIT}}{\text{EBT}}$

      Or,   1.39 $= \dfrac{₹\,13{,}50{,}000 \text{ (as calculated above}}{\text{EBT}}$

      EBT $= ₹\,9{,}71{,}223$

3.   Income Statement

Particulars	(₹)
Sales	84,00,000
Less: Variable Cost (Sales - Contribution)	(63,00,000)
Contribution	21,00,000
Less: Fixed Cost	(7,50,000)
EBIT	13,50,000
Less: Interest (EBIT - EBT)	(3,78,777)
EBT	9,71,223
Less: Tax @ 30%	(2,91,367)
Profit after Tax (PAT)	**6,79,856**

(i) Operating Leverage $= \dfrac{\text{Contribution}}{\text{Earnings before interest and tax (EBIT)}}$

            $= \dfrac{₹\,21{,}00{,}000}{₹\,13{,}50{,}000} =$ **1.556** (approx.)

(ii) Combined Leverage   = Operating Leverage x Financial Leverage

            = 1.556 x 1.39   = **2.163** (approx.)

      Or, $\dfrac{\text{Contribution}}{\text{EBT}}$ $= \dfrac{₹\,21{,}00{,}000}{₹\,9{,}71{,}223} =$ **2.162** (approx.)

(iii) Earnings per Share (EPS)

     EPS $= \dfrac{\text{PAT}}{\text{No. of shares}} = \dfrac{₹\,6{,}79{,}856}{50{,}000} = ₹$ **13.597**

(iv) Earning Yield

      $= \dfrac{\text{EPS}}{\text{Market Price}} \times 100 = \dfrac{₹\,13.597}{₹\,200} \times 100 =$ **6.80%** (approx.)

Note: The question has been solved considering Financial Leverage given in the question as the base for calculating total interest expense including the interest of 12% Bonds of ₹ 30 Lakhs. The question can also be solved in other alternative ways.

Question 3

A Limited and B Limited are identical except for capital structures. A Ltd. has 60 per cent debt and 40 per cent equity, whereas B Ltd. has 20 per cent debt and 80 per cent equity. (All percentages are in market-value terms.) The borrowing rate for both companies is 8 per cent in a no-tax world, and capital markets are assumed to be perfect.

(a) (i) *If X, owns 3 per cent of the equity shares of A Ltd., determine his return if the Company has net operating income of ₹ 4,50,000 and the overall capitalization rate of the company, (K_o) is 18 per cent.*

(ii) *Calculate the implied required rate of return on equity of A Ltd.*

(b) *B Ltd. has the same net operating income as A Ltd.*

(i) *Calculate the implied required equity return of B Ltd.*

(ii) *Analyse why does it differ from that of A Ltd.* **(10 Marks)**

Answer

(a) Value of A Ltd. = $\dfrac{NOI}{K_o} = \dfrac{₹\,4,50,000}{18\%}$ = ₹ 25,00,000

(i) Return on Shares of X on A Ltd.

Particulars	Amount (₹)
Value of the company	25,00,000
Market value of debt (60% x ₹ 25,00,000)	15,00,000
Market value of shares (40% x ₹ 25,00,000)	**10,00,000**

Particulars	Amount (₹)
Net operating income	4,50,000
Interest on debt (8% × ₹ 15,00,000)	1,20,000
Earnings available to shareholders	**3,30,000**
Return on 3% shares (3% × ₹ 3,30,000)	**9,900**

(ii) Implied required rate of return on equity of A Ltd. = $\dfrac{₹\,3,30,000}{₹\,10,00,000}$ = **33%**

(b) (i) Calculation of Implied rate of return of B Ltd.

Particulars	Amount (₹)
Total value of company	25,00,000

Market value of debt (20% × ₹ 25,00,000)	5,00,000
Market value of equity (80% × ₹ 25,00,000)	**20,00,000**
Particulars	**Amount (₹)**
Net operating income	4,50,000
Interest on debt (8% × ₹ 5,00,000)	40,000
Earnings available to shareholders	**4,10,000**

Implied required rate of return on equity $= \dfrac{₹\,4,10,000}{₹\,20,00,000} = $ **20.5%**

(ii) Implied required rate of return on equity of B Ltd. is lower than that of A Ltd. because B Ltd. uses less debt in its capital structure. As the equity capitalisation is a linear function of the debt-to-equity ratio when we use the net operating income approach, the decline in required equity return offsets exactly the disadvantage of not employing so much in the way of "cheaper" debt funds.

Question 4

The Capital structure of PQR Ltd. is as follows:

	₹
10% Debenture	3,00,000
12% Preference Shares	2,50,000
Equity Share (face value ₹ 10 per share)	5,00,000
	10,50,000

Additional Information:

(i)   ₹ 100 per debenture redeemable at par has 2% floatation cost & 10 years of maturity. The market price per debenture is ₹ 110.

(ii) ₹ 100 per preference share redeemable at par has 3% floatation cost & 10 years of maturity. The market price per preference share is ₹ 108.

(iii) Equity share has ₹ 4 floatation cost and market price per share of ₹ 25. The next year expected dividend is ₹ 2 per share with annual growth of 5%. The firm has a practice of paying all earnings in the form of dividends.

(iv) Corporate Income Tax rate is 30%.

Required:

Calculate Weighted Average Cost of Capital (WACC) using market value weights. **(10 Marks)**

Answer

Workings:

1. Cost of Equity (K_e) $= \dfrac{D_1}{P_0 - F} + g = \dfrac{₹\,2}{₹\,25 - ₹\,4} + 0.05 = 0.145$ (approx.)

2. Cost of Debt (K_d)

$$= \dfrac{I(1-t) + \dfrac{(RV - NP)}{n}}{\dfrac{(RV + NP)}{2}}$$

$$= \dfrac{10(1-0.3) + \dfrac{(100-98)}{10}}{\dfrac{(100+98)}{2}} = \dfrac{7 + 0.2}{99} = 0.073 \text{ (approx.)}$$

3. Cost of Preference Shares $(K_p) = \dfrac{PD + \dfrac{(RV - NP)}{n}}{\dfrac{(RV + NP)}{2}}$

$$= \dfrac{12 + \dfrac{(100 - 97)}{10}}{\dfrac{(100 + 97)}{2}} = \dfrac{12 + 0.3}{98.5} = 0.125 \text{ (approx.)}$$

Calculation of WACC using market value weights

Source of capital	Market Value	Weights	After tax cost of capital	WACC (K_o)
	(₹)	(a)	(b)	(c) = (a) × (b)
10% Debentures (₹ 110 × 3,000)	3,30,000	0.178	0.073	0.013
12% Preference shares (₹ 108 × 2,500)	2,70,000	0.146	0.125	0.018
Equity shares (₹ 25 × 50,000)	12,50,000	0.676	0.145	0.098
	18,50,000	1.00		**0.129**

WACC (K_o) = **0.129 or 12.9%** (approx.)

Question 5

A company wants to buy a machine, and two different models namely A and B are available. Following further particulars are available:

Particulars	Machine-A	Machine-B
Original Cost (₹)	8,00,000	6,00,000
Estimated Life in years	4	4
Salvage Value (₹)	0	0

The company provides depreciation under Straight Line Method. Income tax rate applicable is 30%.

The present value of ₹ 1 at 12% discounting factor and net profit before depreciation and tax are as under:

Year	Net Profit Before Depreciation and tax		PV Factor
	Machine-A ₹	Machine-B ₹	
1.	2,30,000	1,75,000	0.893
2.	2,40,000	2,60,000	0.797
3.	2,20,000	3,20,000	0.712
4.	5,60,000	1,50,000	0.636

Calculate:

1. *NPV (Net Present Value)*

2. *Discounted pay-back period*

3. *PI (Profitability Index)*

Suggest: Purchase of which machine is more beneficial under Discounted pay-back period method, NPV method and PI method.   **(10 Marks)**

Answer

Workings:

(i)   Calculation of Annual Depreciation

Depreciation on Machine – A = $\dfrac{₹\,8,00,000}{4}$ = ₹ 2,00,000

Depreciation on Machine – B = $\dfrac{₹\,6,00,000}{4}$ = ₹ 1,50,000

(ii)   Calculation of Annual Cash Inflows

Particulars	Machine-A (₹)			
	1	**2**	**3**	**4**
Net Profit before Depreciation and Tax	2,30,000	2,40,000	2,20,000	5,60,000
Less: Depreciation	2,00,000	2,00,000	2,00,000	2,00,000
Profit before Tax	30,000	40,000	20,000	3,60,000
Less: Tax @ 30%	9,000	12,000	6,000	1,08,000
Profit after Tax	21,000	28,000	14,000	2,52,000
Add: Depreciation	2,00,000	2,00,000	2,00,000	2,00,000
Annual Cash Inflows	**2,21,000**	**2,28,000**	**2,14,000**	**4,52,000**

Particulars	Machine-B (₹)			
	1	**2**	**3**	**4**
Net Profit before Depreciation and Tax	1,75,000	2,60,000	3,20,000	1,50,000
Less: Depreciation	1,50,000	1,50,000	1,50,000	1,50,000
Profit before Tax	25,000	1,10,000	1,70,000	0
Less: Tax @ 30%	7,500	33,000	51,000	0
Profit after Tax	17,500	77,000	1,19,000	0
Add: Depreciation	1,50,000	1,50,000	1,50,000	1,50,000
Annual Cash Inflows	**1,67,500**	**2,27,000**	**2,69,000**	**1,50,000**

(iii) Calculation of PV of Cash Flows

Year	PV of Re 1 @ 12%	Machine – A			Machine - B		
		Cash flow (₹)	PV (₹)	Cumulative PV (₹)	Cash flow (₹)	PV (₹)	Cumulative PV (₹)
1	0.893	2,21,000	1,97,353	1,97,353	1,67,500	1,49,578	1,49,578
2	0.797	2,28,000	1,81,716	3,79,069	2,27,000	1,80,919	3,30,497
3	0.712	2,14,000	1,52,368	5,31,437	2,69,000	1,91,528	5,22,025
4	0.636	4,52,000	2,87,472	8,18,909	1,50,000	95,400	6,17,425

1.   NPV (Net Present Value)

Machine – A

NPV = ₹ 8,18,909 - ₹ 8,00,000 = **₹ 18,909**

Machine – B

NPV = ₹ 6,17,425 – ₹ 6,00,000 = **₹ 17,425**

2. **Discounted Payback Period**

Machine – A

Discounted Payback Period $= 3 + \dfrac{₹\,8,00,000 - ₹\,5,31,437}{₹\,2,87,472}$

$= 3 + 0.934$

$= 3.934$ years or 3 years 11.21 months

Machine – B

Discounted Payback Period $= 3 + \dfrac{₹\,6,00,000 - ₹\,5,22,025}{₹\,95,400}$

$= 3 + 0.817$

$= 3.817$ years or 3 years 9.80 months

3. **PI (Profitability Index)**

Machine – A

Profitability Index $= \dfrac{₹\,8,18,909}{₹\,8,00,000} = 1.024$

Machine – B

Profitability Index $= \dfrac{₹\,6,17,425}{₹\,6,00,000} = 1.029$

Suggestion:

Method	Machine - A	Machine - B	Suggested Machine
Net Present Value	₹ 18,909	₹ 17,425	**Machine A**
Discounted Payback Period	3.934 years	3.817 years	**Machine B**
Profitability Index	1.024	1.029	**Machine B**

Question 6

(a) *State four tasks involved to demonstrate the importance of good Financial Management.*

(4 Marks)

(b) *Explain Electronic Cash Management System.* *(4 Marks)*

(c) *Define Internal Rate of Return (IRR)* *(2 Marks)*

OR

Explain in brief the following bonds:

(i)   Callable Bonds

(ii)   Puttable Bonds

Answer

(a)   The best way to demonstrate the importance of good financial management is to describe some of the tasks that it involves:

- **Taking care** not to over-invest in fixed assets

- **Balancing** cash-outflow with cash-inflows

- **Ensuring** that there is a sufficient level of short-term working capital

- **Setting** sales revenue targets that will deliver growth

- **Increasing** gross profit by setting the correct pricing for products or services

- **Controlling** the level of general and administrative expenses by finding more cost-efficient ways of running the day-to-day business operations, and

- **Tax planning** that will minimize the taxes a business has to pay.

(b)   Electronic Cash Management System: Most of the cash management systems now-a-days are electronically based, since 'speed' is the essence of any cash management system. Electronically, transfer of data as well as funds play a key role in any cash management system. Various elements in the process of cash management are linked through a satellite. Various places that are interlinked may be the place where the instrument is collected, the place where cash is to be transferred in company's account, the place where the payment is to be transferred etc.

(c)   Internal rate of return: Internal rate of return for an investment proposal is the discount rate that equates the present value of the expected cash inflows with the initial cash outflow.

OR

(i)   Callable bonds: A callable bond has a call option which gives the issuer the **right to redeem the bond before maturity** at a predetermined price known as the call price (Generally at a premium).

(ii)   Puttable bonds: Puttable bonds give the investor a put option (i.e. the **right to sell the bond**) back to the company before maturity.

*Question No. **7** is compulsory.*

*Answer any **three** from the rest.*

Question 7

(a) *Given the following equations:*

C = 200 + 0.8Y

I = 1200

Calculate equilibrium level of National Income and the Consumption Expenditure at equilibrium level of National Income. **(3 Marks)**

(b) *Distinguish between 'direct quote' and 'indirect quote' with reference to express nominal exchange rate between two currencies.* **(2 Marks)**

(c) *Compute M2 supply of money from the following RBI data:* **(3 Marks)**

(₹ in Crores)

Currency with public	*435656.6*
'Other' deposits with RBI	*1234.2*
Saving deposits with post office saving banks	*647.7*
Net time deposits with the banking system	*514834.3*
Demand deposits with banks.	*274254.9*

(d) *Explain the Transactions Motive for holding cash.* **(2 Marks)**

Answer

(a) Y = C + I

Y = 200 + 0.8 Y + 1200

Y-0.8Y = 1400

0.2Y = 1400

Y = 1400/0.2 = 7000

C = 200+ 0.8 x 7000 = 5800

(b) Exchange rate is the rate at which the currency of one country is exchanged for the currency of another country. There are two ways to express nominal exchange rate between two currencies namely direct quote and Indirect quote. A direct quote is the number of units of a local currency exchangeable for one unit of a foreign currency. The price of 1 dollar may be quoted in terms of how much rupees it takes to buy one dollar.

An indirect quote is the number of units of a foreign currency exchangeable for one unit of local currency. A quotation in direct form can easily be converted into a quotation in indirect form and vice versa. This is done by taking the reciprocal of the given rate.

(c) M1 = Currency Notes and Coins with the people + demand deposits with the banking system (currency and saving deposit accounts) + Other deposits with the RBI

= 435656.6 cr + 274254.9 cr + 1234.2 cr

= 711145.7 cr

M2 = M1 + Saving deposit with Post Office Saving Bank

= 711145.7cr + 647.7cr

= 711793.4 cr

(d) The transactions motive for holding cash relates to 'the need for cash for current transactions for personal and business exchange.' The need for holding money arises between as there is lack of synchronization between receipts and expenditures. The transaction motive is further classified into income motive and business motive, both of which stressed on the requirement of individuals and businesses respectively to bridge the time gap between receipt of income and planned expenditure. The transaction demand for money is a direct proportional and positive function of the level of Income.

Lr = KY

Where Lr is the transaction demand for money

K is the ratio of earnings which is kept for transaction purposes

Y is the earning.

Question 8

(a) Calculate GNP at market price from the following data using Value Added Method.

(₹ in Crores)

Government Transfer Payments	*1800*
Value of output in Primary Sector	*1500*
Value of output in Secondary Sector	*2700*
Value of output in Tertiary Sector	*2100*
Net factor income from Abroad	*(-) 60*
Intermediate Consumption in Primary Sector	*750*
Intermediate Consumption in Secondary Sector	*1200*
Intermediate Consumption in Tertiary Sector	*900*

(5 Marks)

(b) (i) *Distinguish between Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR).*

(3 Marks)

(ii) *What do you mean by "Crowding Out" in relation to fiscal policy?*   *(2 Marks)*

Answer

(a) Gross Value Added at Market Price = Value of Output – Intermediate Consumption

= 1500+ 2700 + 2100- 750-1200-900

= 3450 cr

GNP at market Price   = Gross Value Added at Market Price + Net factor Income from Abroad

= 3450 + (-) 60

= 3390 cr

(b) (i) Cash Reserve Ratio (CRR) refers to the average daily balance that a bank is required to maintain with the Reserve bank of India as a share of its total net demand and time liabilities (NDTL). This Percentage will be notified from time to time by Reserve bank of India. The RBI may set the ratio in keeping with the broad objective of maintaining monetary stability in the economy. This requirement applies uniformly to all the scheduled banks in the country irrespective of its size or financial position.

Higher the CRR with the RBI, lower will be the liquidity in the system and vice versa. During Slowdown in the economy, the RBI reduces the CRR in order to enable the banks to expand credit and increase the supply of money available in the economy. In order to contain credit expansion during the period of high inflation, the RBI increases the CRR.

As per the Banking Regulations Act 1949, all Schedule commercial banks in India are required to maintain a stipulated percentage of their total Demand and Time liabilities (DTL)/ Net DTL (NDTL) in one of the following forms

(i) Cash

(ii) Gold

(iii) Investment 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 Government under their market borrowings programme.

(d) Other instruments as notified by the RBI. These include mainly the securities issued by PSEs

While CRR has to be maintained by banks as cash with the RBI, the SLR requires holding of assets in one of the above three categories by the bank itself. The Banks which fail to meet its SLR obligations are liable to be imposed penalty in the form of penal interest payable to RBI. The SLR is also a powerful tool for controlling liquidity in the domestic market by means of manipulating bank credit.

(ii) Government Spending would sometimes substitute private spending and when this happens the impact of government spending on aggregate demand would be smaller than what it should be and therefore fiscal Policy may become ineffective. The crowding out view is that a rapid growth of government spending leads to a transfer of scarce productive resources from the private sector to the public sector where productivity might be lower. An increase in the size of government spending during recessions will crowd out private spending in an economy and lead to reduction in an economy's ability from the recession and possibly also reduce the economy's prospects of long run economic growth.

Crowding out effect is the negative effect fiscal policy may generate when money from the private sector is crowded out to the public sector. In other words when spending by government in an economy replaces private spending, the latter is said to be crowded out.

Question 9

(a) (i) Compute GDP at market price and Mixed Income of Self-Employed from the data given below :

(₹ in Crores)

Compensation of Employees	*810*
Depreciation	*26*
Rent, Interest and Profit	*453*
NDP at factor cost	*1450*
Subsidies	*18*
Net factor Income from Abroad	*(-) 17*
Indirect taxes.	*57*

(ii) Due to Recession in an economy, Government expenditure increases by ₹ 6 billion. If Marginal Propensity to Consume (MPC) in the economy is 0.8, compute the increase in GDP.   **(2 Marks)**

(b) (i) Describe the advantages of Floating Exchange Rate.   **(3 Marks)**

(ii) *Discuss the role of 'Market Stabilization Scheme' in our economy.*   **(2 Marks)**

Answer

(a) (i) GDP at Factor Cost: NDP at Factor Cost + Depreciation = 1450cr + 26cr = 1476 Cr

GDP at Market Price = GDP at Factor Cost + Net Indirect Taxes

= 1476cr + Indirect Taxes – Subsidies

= 1476cr + 39 cr

= 1515 Cr

NNP at Factor Cost = NDP at Factor cost + Net Factor Income from Abroad

NNP at Factor Cost = Compensation of employees + Operating Surplus + Mixed Income of Self Employed + Net Factor Income from Abroad

Mixed Income of Self Employed = 1450cr – 1263 cr = 187 cr

(ii) Change in Income ÷ Change in Expenditure = 1- MPC = 1– 0.8 = 0.2

Change in Income × 0.2 = Change in Expenditure = 6 bn

Change in Income = 6 ÷0.2 = 30 bn

Hence the GDP will increase by 30 bn.

(b) (i) Under floating exchange rate regime, the equilibrium value of the exchange rate of a country's currency is market determined i.e., the demand for and supply of currency relative to other currencies determine the exchange rate. A floating exchange rate has many advantages:

(a) A floating exchange rate has the greatest advantage of allowing a Central bank and /or government to persue its own monetary policy.

(b) Floating exchange rate regime allows exchange rate to be used as a policy tool: for example, policy makers can adjust the nominal exchange rate to influence the competitiveness of the tradable goods sector.

(c) As there is no obligation or necessary to intervene in the currency markets, the Central bank is not required to maintain a huge foreign exchange reserves.

On the contrary a floating rate has greater policy flexibility but less stability.

(ii) Market Stabilization Scheme was introduced in 2004 as an Instrument for monetary management with the primary aim of aiding the sterilization operations of the RBI. (Sterilization is the process by which the monetary authority sterilizes the effects of significant foreign capital inflows on domestic liquidity by off- loading parts of the stock of government securities held by it). Surplus liquidity of a more enduring nature arising from large capital inflows is absorbed through sale of short, dated

government securities and treasury bills. Under this Scheme, the government of India borrows from the RBI (Such borrowing being additional to its normal borrowing requirements and issues treasury-bills/dated securities for absorbing excess liquidity from the market arising from large capital inflows.

Question10

(a) (i) Describe the allocation instruments available to the Government to influence resource allocation in an economy. 3

   (ii) Explain the concept of 'Money Multiplier'.   **(2 Marks)**

(b) (i) Calculate the Fiscal Deficit and Primary Deficit from the data given below:

(₹ in Crores)

Total Expenditure on Revenue Account and Capital Account	547.62
Revenue Receipts	226.82
Non-debt Capital Receipts	103.00
Interest Payments	84.00

(3 Marks)

   (ii) Describe the purposes of Trade Barriers in international trade.   **(2 Marks)**

Answer

(a) (i) The Resource allocation role of the government's fiscal policy focuses on the potential of the government to improve economic performance through its expenditure and tax policies. The allocative function in budgeting determines who and what will be taxed as well as how and on what the government revenue will be spent. The allocative function also involves the reallocation of society's resources from private to public use.

A variety of allocation instruments are available by which governments can influence resource allocation in the economy. For example:

- Government may directly produce an economic good.

- Government may influence private allocation through incentives and disincentives.

- Government may influence allocation through its competitive policies, merger policies etc. which affect the structure of industry and commerce.

- Government's regulatory activities such as licensing control minimum wages and directives on location of industry influence resource allocation.

- Government sets legal and administrative framework and

- Any mixture of intermediate methods may be adopted by the government.

(ii) Money multiplier m is defined as a ratio that relates the changes in the money supply to a given change in the monetary base. It is the ratio of the stock of money to the stock of high-powered money. It denotes by how much the money supply will change for a given change in high powered money. It denotes by how much the money supply will change for a given change in high powered money. The money-multiplier process explains how an increase in the monetary base causes, the money supply to increase by a multiplied amount. For example, if there is an injection of ₹ 100cr through an open market operation by the Central Bank of the country and if it leads to an increment of ₹ 500 cr of final money supply, then the money multiplier is said to be 5. Hence the multiplier indicates the change in monetary base which is transformed into money supply.

Money Multiplier (m) = Money Supply ÷ Monetary Base

(b) (i) Fiscal Deficit = *Total Expenditure on Revenue Account and Capital Account –* Revenue receipts- *Non-debt Capital Receipts*

$$= 547.2 – 226.82 - 103.00$$

$$= 217.8 \text{ Cr}$$

Primary Deficit = Fiscal Deficit – Interest Payments

$$= 217.8cr – 84.00cr$$

$$= 133.8 \text{ Cr.}$$

(ii) Over the past decades significant transformation are happening in terms of growth as well as trends of flows and pattern of global trade. The increasing importance of developing countries has been a salient feature of the shifting global trade patterns. Fundamental changes are taking place in the way countries associate themselves for International trade and investments. Trading through regional arrangements which foster closer trade and economic relations is shaping the global trade landscape in an unprecedented way. Trade barriers create obstacles to trade, reduce the prospect of market access, make imported goods more expensive, increase consumption of domestic goods, protect domestic industries, and increase government revenue.

Question 11

(a) (i) You are given the following information:

Good M (Mobile Phones)	India (in $)	Japan (in $)	China (in $)
Average Cost	70.5	69.4	70.9
Price per unit for domestic sales	71.2	71.10	70.9
Price charged in Dubai	71.9	70.6	70.6

  (A) *Which of the three exporters are engaged in anticompetitive act in the international market while pricing its export of mobile phones to Dubai?*

  (B) *What would be the effect of such pricing on domestic producers of mobile phones?* ***(3 Marks)***

 (ii) *Explain the significance of public debt as an instrument of fiscal policy.* ***(2 Marks)***

(b) (i) *Describe the benefits and costs of FDI to the host country.* ***(3 Marks)***

 (ii) *Explain the concept of 'private cost'.* ***(2 Marks)***

   OR

What do you mean by 'Reserve Money'?

Answer

(a) (i) China and Japan are engaged in anti-competitive act in the international market while pricing its export of mobile phones to Dubai. Both China and Japan are selling at a price which is less than price per unit for domestic sales.

  The effect of such pricing will be having adverse effect on domestic industry as they will lose competitiveness in their domestic market due to unfair practice of dumping. Dubai may prove damage to domestic industries and change anti-dumping duties on goods imported from Japan and China so as to raise the price and making it at par with similar goods produced by domestic firms.

 (ii) If a government has borrowed money over the years to finance its deficits and has not paid it back through accumulated surpluses then it is said to be in debt. Public debt may be internal or external, when the government borrows from its own people in the country, it is called internal debt. On the other hand, when the government borrows from outside sources, the debt is called external debt. Public debt takes two forms namely, market loans and small savings. A national Policy of Public borrowing and debt repayment is a potent weapon to fight inflation and deflation. Borrowing from the public through the sale of bonds and securities curtails the aggregate demand in the economy. Repayment of debt by government increases the availability of money in the economy and increase aggregate demand.

(b) (i) **Benefit of Foreign Direct Investment:**

- Entry of foreign enterprises fosters competition and generates a competitive environment in the host country.

- International capital allows countries to finance more investment than can be supported by domestic savings.

- FDI can accelerate growth by providing much needed capital, technological know-how and management skill.

- Competition for FDI among national government promotes political and structural reforms.
- FDI also help in creating direct employment opportunities.
- It also promotes relatively higher wages for skilled jobs.
- FDI generally entails people to people relations and is usually considered as a promoter of bilateral and international relations.
- Foreign investment projects also would act as a source of new tax revenue which can be used for development projects.

Cost of Foreign Direct Investment:

- FDI are likely to concentrate on capital intensive methods of production and services so they need to hire few workers.
- FDI flows has tendency to move towards regions which is well endowed in natural resources and infrastructure so accentuate regional disparity.
- If foreign corporations are able to secure incentives in the form of tax holidays or similar provisions, the host country loses tax revenue.
- FDI is also held responsible by many for ruthless exploitation of natural resources and the possible environmental damage.
- With substantial FDI in developing countries there is strong possibility of emergence of a dual economy with a developed foreign sector and an underdeveloped domestic sector.
- Foreign entities are usually accused of being anti-ethical as they frequently resort to methods like aggregate advertising and anticompetitive practices which would induce market distortions.

(ii) Private cost is the cost faced by the producer or consumer directly involved in a transaction. If we take the case of a producer his private cost includes direct cost of labour, materials, energy, and other indirect overheads.

Social Cost = Private cost + External Cost

<div align="center">OR</div>

The Reserve Money, also known as central bank money, base money or high powered money determines the level of liquidity and the price level in the economy.

Reserve Money = Currency in Circulation + Banker's deposits with the RBI + other deposits with the RBI.

= Net RBI credit to the government + RBI credit to the commercial sector + RBI's claim on banks + RBI's net foreign exchange assets + Government Currency liabilities to the Public- RBI's net non-monetary liabilities