

MOCK TEST PAPER - 2
INTERMEDIATE: GROUP – II
PAPER – 8: FINANCIAL MANAGEMENT & ECONOMICS FOR FINANCE
8A : FINANCIAL MANAGEMENT
SUGGESTED ANSWERS/ HINTS

1. (a)

Cost Structure for 52000 units	
Particulars	Amount (₹)
Raw Material @ ₹ 400	2,08,00,000
Direct Wages @ ₹ 150	78,00,000
Manufacturing Overheads@ ₹ 200	1,04,00,000
Selling and Distribution OH@ ₹ 100	52,00,000
Total Cost	4,42,00,000
Sales@₹1000	5,20,00,000

Particulars	Calculation	Amount (₹)
A. Current Assets:		
Raw Material Stock	$2,08,00,000 \times \frac{4}{52}$	16,00,000
Work in Progress (WIP) Stock	$2,08,00,000 + \frac{(78,00,000 + 1,04,00,000)}{2} \times \frac{4}{52}$	23,00,000
Finished Goods Stock	$4,42,00,000 \times \frac{4}{52}$	34,00,000
Receivables	$5,20,00,000 \times \frac{8}{52}$	80,00,000
Cash		50,000
	Total Current Assets	1,53,50,000
B. Current Liabilities:		
Creditors	$20800000 \times \frac{4}{52}$	16,00,000
C. Working Capital Estimates(A-B)		1,37,50,000

(b) Break Even Sales = ₹ 6800000 × 0.75 = ₹ 51,00,000

Income Statement		(Amount in ₹)	
	Original	Calculation of Interest at BEP (backward calculation)	Now at present level
Sales	68,00,000	51,00,000	68,00,000
Less: Variable Cost	40,80,000	30,60,000	40,80,000

Contribution	27,20,000	20,40,000	27,20,000
Less: Fixed Cost	16,32,000	16,32,000	16,32,000
EBIT	10,88,000	4,08,000	10,88,000
Less: Interest (EBIT-PBT)	?	3,93,714	3,93,714
PBT	?	14,286(10,000/70%)	6,94,286
Less: Tax @ 30%(or PBT-PAT)	?	4,286	2,08,286
PAT	?	10,000(Nil+10,000)	4,86,000
Less: Preference Dividend	10,000	10,000	10,000
Earnings for Equity share holders	?	Nil (at BEP)	4,76,000
Number of Equity Shares	1,50,000	1,50,000	1,50,000
EPS	?	-	3.1733

So Interest=₹3,93,714, EPS=₹3.1733, Amount of debt=3,93,714/12%=₹ 32,80,950

(c) Statement showing the Evaluation of Accounts Receivable Policies

(Amount in ₹)

	Particulars	Present Policy	Proposed Policy 1	Proposed Policy 2
A	Expected Profit:			
	(a) Credit Sales	55,00,000	65,00,000	70,00,000
	(b) Total Cost other than Bad Debts:			
	(i) Variable Costs (75%)	41,25,000	48,75,000	52,50,000
	(c) Bad Debts	2,00,000	3,50,000	5,00,000
	(d) Expected Profit [(a) – (b) – (c)]	11,75,000	12,75,000	12,50,000
B	Opportunity Cost of Investments in Accounts Receivable (Working Note)	1,23,750	1,82,813	2,62,500
C	Net Benefits (A – B)	10,51,250	10,92,187	9,87,500

Recommendation: The Proposed Policy 1 should be adopted since the net benefits under this policy are higher as compared to other policies.

Working Note:

Calculation of Opportunity Cost of Average Investments

Opportunity Cost = Total Cost × Collection period/12 × Rate of Return/100

Present Policy = ₹ 41,25,000 × 2.4/12 × 15% = ₹1,23,750

Proposed Policy 1 = ₹ 48,75,000 × 3/12 × 15% = ₹ 1,82,813

Proposed Policy 2 = ₹ 52,50,000 × 4/12 × 15% = ₹ 2,62,500

(d) Price per share according to Gordon's Model is calculated as follows:

Particulars	Amount in ₹
Net Profit	78 lakhs
Less: Preference dividend(120 lakhs@15%)	18 lakhs
Earnings for equity shareholders	60 lakhs

Earnings Per Share	60 lakhs/6 lakhs = ₹ 10.00
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Price per share according to Gordon's Model is calculated as follows:

$$P_0 = \frac{E_1(1-b)}{K_e - br}$$

Here, $E_1 = 10$, $K_e = 16\%$

(i) When dividend pay-out is 30%

$$P_0 = \frac{10 \times 0.30}{0.16 - (0.70 \times 0.2)} = \frac{3}{0.16 - 0.14} = ₹150$$

(ii) When dividend pay-out is 50%

$$P_0 = \frac{10 \times 0.5}{0.16 - (0.5 \times 0.2)} = \frac{5}{0.16 - 0.10} = ₹83.33$$

(iii) When dividend pay-out is 100%

$$P_0 = \frac{10 \times 1}{0.16 - (0 \times 0.2)} = \frac{10}{0.16} = ₹ 62.5$$

2. Calculation of Equity Share capital and Reserves and surplus:

Alternative 1:

$$\text{Equity Share capital} = ₹20,00,000 + \frac{₹2,00,000 \times 100}{133.3333} = ₹21,50,000$$

$$\text{Reserves} = ₹10,00,000 + \frac{₹2,00,000 \times 33.3333}{133.3333} = ₹10,50,000$$

Alternative 2:

$$\text{Equity Share capital} = ₹ 20,00,000 + \frac{₹ 9,00,000 \times 100}{125} = ₹27,20,000$$

$$\text{Reserves} = ₹10,00,000 + \frac{₹ 9,00,000 \times 25}{125} = ₹11,80,000$$

Capital Structure Plans

Amount in ₹

Capital	Alternative 1	Alternative 2
Equity Share capital	21,50,000	27,20,000
Reserves and surplus	10,50,000	11,80,000
10% long term debt	15,00,000	15,00,000
14% Debentures	8,00,000	-
8% Irredeemable Debentures	-	1,00,000
Total Capital Employed	55,00,000	55,00,000

Computation of Present Earnings before interest and tax (EBIT)

EPS (₹)	21
No. of equity shares	20,000

Earnings for equity shareholders (I x II) (₹)	4,20,000
Profit Before Tax (III/75%) (₹)	5,60,000
Interest on long term loan (1500000 x 10%) (₹)	1,50,000
EBIT (IV + V) (₹)	7,10,000

EBIT after expansion = ₹7,10,000 + ₹2,00,000 = ₹9,10,000

Evaluation of Financial Plans on the basis of EPS, MPS and Financial Leverage

Amount in ₹

Particulars	Alternative I	Alternate II
EBIT	9,10,000	9,10,000
Less: Interest: 10% on long term loan	(1,50,000)	(1,50,000)
14% on Debentures	(1,12,000)	Nil
8% on Irredeemable Debentures	Nil.	(8000)
PBT	6,48,000	7,52,000
Less: Tax @25%	(1,62,000)	(1,88,000)
PAT	4,86,000	5,64,000
No. of equity shares	21,500	27,200
EPS	22.60	20.74
Applicable P/E ratio (Working Note 1)	7	8.5
MPS (EPS X P/E ratio)	158.2	176.29
Financial Leverage EBIT/PBT	1.40	1.21

Working Note 1

	Alternative I	Alternative II
Debt:		
₹15,00,000 + ₹8,00,000	23,00,000	-
₹15,00,000 + ₹1,00,000	-	16,00,000
Total capital Employed (₹)	55,00,000	55,00,000
Debt Ratio (Debt/Capital employed)	=0.4182	=0.2909
	=41.82%	=29.09%
Change in Equity: ₹21,50,000-₹20,00,000	1,50,000	
₹27,20,000-₹20,00,000		7,20,000
Percentage change in equity	7.5%	36%
Applicable P/E ratio	7	8.5

Calculation of Cost of equity and various type of debt

	Alternative I	Alternative II
A) Cost of equity		
EPS	22.60	20.74
DPS (EPS X 60%)	13.56	12.44
Growth (g)	10%	10%
Po (MPS)	158.2	176.29

Ke= Do (1 + g)/ Po	$\frac{13.56 (1.1)}{158.2}$	$\frac{12.44 (1.1)}{176.29}$
	=9.43%	=7.76%

B) Cost of Debt:

10% long term debt	$10\% + (1-0.25)$ = 7.5%	$10\% + (1-0.25)$ = 7.5%
14% redeemable debentures	$\frac{14(1-0.25) + (110-100/10)}{110+100/2}$ = 10.5 + 1 / 10.5 = 10.95%	nil
8% irredeemable debenture	NA	$8000(1-0.25)/1,00,00 = 6\%$

Calculation of Weighted Average cost of capital (WACC)

Capital	Alternative 1			Alternative 2		
	Weights	Cost (%)	WACC	Weights	Cost (%)	WACC
Equity Share Capital	0.3909	9.43	3.69%	0.4945	7.76	3.84%
Reserves and Surplus	0.1909	9.43	1.80%	0.2145	7.76	1.66%
10% Long term Debt	0.2727	7.50	2.05%	0.2727	7.50	2.05%
14% Debenture	0.1455	10.95	1.59%			
8% Irredeemable Debentures	-			0.0182	6	0.11%
			9.12%			7.66%

Calculation Marginal Cost of Capital (MACC)

Capital	Alternative 1			Alternative 2		
	Amount(weight)	Cost (%)	MACC	Amount (weight)	Cost (%)	MACC
Equity Share Capital	₹ 1,50,000(0.15)	9.43	1.41%	₹7,20,000(0.72)	7.76	5.59%
Reserves and Surplus	₹ 50,000(0.05)	9.43	0.47%	₹1,80,000(0.18)	7.76	1.40%
14% Debenture	₹ 8,00,000(0.80)	10.95	8.76%	-		0.00%
8% Irredeemable Debentures	-			₹1,00,000(0.10)	6	0.60%
Total Capital Employed	₹10,00,000		10.65%	₹10,00,000		7.58%

Summary of solution:

	Alternate I	Alternate II
Earning per share (EPS)	22.60	20.74
Market price per share (MPS)	158.20	176.29
Financial leverage	1.4043	1.2101
Weighted Average cost of capital (WACC)	9.12%	7.66%
Marginal cost of capital (MACC)	10.65%	7.58%

Alternative 1 of financing will be preferred under the criteria of EPS, whereas Alternative II of financing will be preferred under the criteria of MPS, Financial leverage, WACC and marginal cost of capital.

3. 1. Current Ratio = 3:1

$$\text{Current Assets (CA)/Current Liability (CL) = 3:1}$$

$$\text{CA} = 3\text{CL}$$

$$\text{WC} = 10,00,000$$

$$\text{CA} - \text{CL} = 10,00,000$$

$$3\text{CL} - \text{CL} = 10,00,000$$

$$2\text{CL} = 10,00,000$$

$$\text{CL} = \frac{10,00,000}{2}$$

$$\text{CL} = \text{₹}5,00,000$$

$$\text{CA} = 3 \times 5,00,000$$

$$\text{CA} = \text{₹}15,00,000$$

2. Acid Test Ratio = CA – Stock / CL = 1:1

$$= \frac{15,00,000 - \text{Stock}}{5,00,000} = 1$$

$$15,00,000 - \text{stock} = 5,00,000$$

$$\text{Stock} = \text{₹}10,00,000$$

3. Stock Turnover ratio (on sales) = 5

$$\frac{\text{Sales}}{\text{Avg stock}} = 5$$

$$\frac{\text{Sales}}{10,00,000} = 5$$

$$\text{Sales} = \text{₹}50,00,000$$

4. Gross Profit = 50,00,000 x 40% = ₹20,00,000

$$\text{Net profit (PBT)} = 50,00,000 \times 10\% = \text{₹}5,00,000$$

5. PBIT/PBT = 2.2

$$\text{PBIT} = 2.2 \times 5,00,000$$

$$\text{PBIT} = 11,00,000$$

$$\text{Interest} = 11,00,000 - 5,00,000 = \text{₹}6,00,000$$

$$\text{Long term loan} = \frac{6,00,000}{0.12} = \text{₹}50,00,000$$

6. Average collection period = 30 days

$$\text{Receivables} = \frac{30}{360} \times 50,00,000 = 4,16,667$$

7. Fixed Assets Turnover Ratio = 0.8

50,00,000/ Fixed Assets = 0.8

Fixed Assets = ₹62,50,000

Income Statement

	Amount (₹)
Sales	50,00,000
Less: Cost of Goods Sold	30,00,000
Gross Profit	20,00,000
Less: Operating Expenses	9,00,000
Less: Interest.	6,00,000
Net Profit	5,00,000

Balance sheet

Liabilities	Amount (₹)	Assets	Amount (₹)
Equity share capital	22,50,000	Fixed asset	62,50,000
Long term debt	50,00,000	Current assets:	
Current liability	5,00,000	Stock	10,00,000
		Receivables	4,16,667
		Other	83,333
	77,50,000		77,50,000

4. (a) Calculation of Cash Flow After Tax (CFAT) in original scenario

Sr. No.	Particulars	
1	Sales units	1,50,000
		(₹)
2	Sale Price p.u.	120
3	Sales	1,80,00,000
4	Variable Cost p.u.	60
5	Variable Cost	90,00,000
6	Contribution (3-4)	90,00,000
7	Fixed OH (Excluding Depreciation)	22,50,000
8	Depreciation	30,00,000
9	EBIT or PBT (6-7-8)	37,50,000
10	Tax@40%	15,00,000
11	Profit After Tax (PAT)	22,50,000
12	Add: Depreciation	30,00,000
13	CFAT	52,50,000

Calculation of NPV in original Scenario

Years	Particulars	Cash Flows	PVF	PV
0	Initial Investment	(1,50,00,000)	1	(1,50,00,000)
0	Initial WC introduced	(60,00,000)	1	(60,00,000)
1 to 5	CFAT	52,50,000	3.6048	189,25,075
5	WC released	60,00,000	0.5674	34,04,561
	NPV			13,29,636

Since the NPV of the project is Positive the project is viable.

(b) **Sensitivity Analysis of the project under various conditions**

Sr. No.	Particulars	(i) Selling Price reduced by 10%	(ii) Variable Cost increased by 10%	(iii) Plant & Machinery cost increased by 10%
1	Sales units	1,50,000	1,50,000	1,50,000
		₹	₹	₹
2	Sale Price p.u.	108	120	120
3	Sales	162,00,000	180,00,000	180,00,000
4	Variable Cost p.u.	60	66	60
5	Variable Cost	90,00,000	99,00,000	90,00,000
6	Contribution (3-4) [or Contribution per unit x 1,50,000 units]	72,00,000	81,00,000	90,00,000
7	Fixed OH (Excluding Depreciation)	22,50,000	22,50,000	22,50,000
8	Depreciation	30,00,000	30,00,000	33,00,000
9	EBIT or PBT (6-7-8)	19,50,000	28,50,000	34,50,000
10	Tax	7,80,000	11,40,000	13,80,000
11	PAT	11,70,000	17,10,000	20,70,000
12	Add: Depreciation	30,00,000	30,00,000	33,00,000
13	CFAT	41,70,000	47,10,000	53,70,000
14	PV of CFAT (CFAT x 3.6048)	150,31,917	169,78,496	193,57,648
15	WC released (60,00,000 x 0.5674)	34,04,561	34,04,561	34,04,561
16	Initial Investment	(1,50,00,000)	(1,50,00,000)	(1,50,00,000)
17	Initial WC introduced	(60,00,000)	(60,00,000)	(60,00,000)
18	NPV (14+15-16-17)	(25,63,522)	(6,16,943)	2,62,209
19	% Change in NPV [Based on original NPV (13,29,636)]	-292.80%	-146.40%	-80.28%

From the above calculations it can be seen that change in selling price is most sensitive and has the maximum effect on the NPV.

5. (a)

Income Statement

Particulars	Amount (₹)
Sales	1,11,00,000
Contribution (Sales × P/V ratio)	27,75,000
Less: Fixed cost (excluding Interest)	(7,15,000)
EBIT (Earnings before interest and tax)	20,60,000
Less: Interest on debentures (12% × ₹ 60,91,400)	(7,30,968)
EBT (Earnings before tax)	13,29,032
Less: Tax @ 30%	3,98,710
PAT (Profit after tax)	9,30,322

(i) Operating Leverage:

$$= \frac{\text{Contribution}}{\text{EBIT}} = \frac{\text{₹ } 27,75,000}{\text{₹ } 20,60,000} = 1.35$$

(ii) Combined Leverage:

$$= \text{Operating Leverage} \times \text{Financial Leverage}$$

$$= 1.35 \times 1.55 = 2.09 \text{ (Approx)}$$

Or,

$$\text{Combined Leverage} = \frac{\text{Contribution}}{\text{EBIT}} \times \frac{\text{EBIT}}{\text{EBT}}$$

$$\text{Combined Leverage} = \frac{\text{Contribution}}{\text{EBT}} = \frac{\text{₹ } 20,60,000}{\text{₹ } 13,29,032} = 2.09 \text{ (Approx)}$$

(iii) Earnings per share (EPS):

$$= \frac{\text{PAT}}{\text{No. of shares outstanding}} = \frac{\text{₹ } 9,30,322}{6,55,000 \text{ equity shares}} = \text{₹ } 1.42$$

(b) **Seed Capital Assistance:** The seed capital assistance has been designed by IDBI for professionally or technically qualified entrepreneurs. All the projects eligible for financial assistance from IDBI, directly or indirectly through refinance are eligible under the scheme. The project cost should not exceed ₹ 2 crores and the maximum assistance under the project will be restricted to 50% of the required promoter's contribution or ₹ 15 lacs whichever is lower.

The seed capital assistance is interest free but carries a security charge of one percent per annum for the first five years and an increasing rate thereafter

6. (a) **NPV versus IRR:** NPV and IRR methods differ in the sense that the results regarding the choice of an asset under certain circumstances are mutually contradictory under two methods. In case of mutually exclusive investment projects, in certain situations, they may give contradictory results such that if the NPV method finds one proposal acceptable, IRR favours another. The different rankings given by the NPV and IRR methods could be due to size disparity problem, time disparity problem and unequal expected lives.

The net present value is expressed in financial values whereas internal rate of return (IRR) is expressed in percentage terms.

In the net present value cash flows are assumed to be re-invested at cost of capital rate. In IRR reinvestment is assumed to be made at IRR rates.

- (b) **Commercial Paper:** A Commercial Paper is an unsecured money market instrument issued in the form of a promissory note. The Reserve Bank of India introduced the commercial paper scheme in the year 1989 with a view to enabling highly rated corporate borrowers to diversify their sources of short- term borrowings and to provide an additional instrument to investors. Subsequently, in addition to the Corporate, Primary Dealers and All India Financial Institutions have also been allowed to issue Commercial Papers. Commercial papers are issued in denominations of ₹ 5 lakhs or multiples thereof and the interest rate is generally linked to the yield on the one-year government bond.

All eligible issuers are required to get the credit rating from Credit Rating Information Services of India Ltd, (CRISIL), or the Investment Information and Credit Rating Agency of India Ltd (ICRA) or the Credit Analysis and Research Ltd (CARE) or the FITCH Ratings India Pvt. Ltd or any such other credit rating agency as is specified by the Reserve Bank of India.

- (c) **Desirability Factor/Profitability Index**

In certain cases, we have to compare a number of proposals each involving different amount of cash inflows. One of the methods of comparing such proposals is to work out what is known as the 'Desirability factor' or 'Profitability index'. In general terms, a project is acceptable if its profitability index value is greater than 1.

Mathematically, the desirability factor is calculated as below:

$$\frac{\text{Sum of Discounted Cash inflows}}{\text{Initial Cash outlay or Total Discounted Cash outflow (as the case may be)}}$$

OR

- (c) **Cut-off Rate:** It is the minimum rate which the management wishes to have from any project. Usually this is based upon the cost of capital. The management gains only if a project gives return of more than the cut - off rate. Therefore, the cut - off rate can be used as the discount rate or the opportunity cost rate.

PAPER 8B: ECONOMICS FOR FINANCE

1. (a) Production taxes or subsidies that are paid or received in relation to production and are independent of the volume of actual production. Examples of production taxes are land revenues, stamps and registration fees and tax on profession, factory license fee, taxes to be paid to the local authorities, pollution tax etc. Examples of production subsidies are subsidies to railways, subsidies to village and small industries.

Product taxes or subsidies that are paid or received on per unit of product. Examples of product taxes are excise duties, sales tax, service tax and import-export duties. Examples of product subsidies are food, petroleum, and fertilizer subsidies.

- (b) SNA, developed by United Nations, provides a comprehensive conceptual and accounting framework for compiling and reporting macroeconomic statistics for analyzing and evaluating the performance of an economy.

(c) $GVA_{MP} = \text{Gross Value Output}_{MP} - \text{Intermediate consumption}$
 $= (\text{Sales} + \text{change in stock}) - \text{Intermediate consumption}$
 $= 3000 - 500 = 2500$

$GDP_{MP} = GVA_{MP} = 2500 \text{ Crores}$

$NDP_{MP} = GDP_{MP} - \text{consumption of fixed capital}$
 $= 2500 - 100$
 $= 2400 \text{ Crores}$

$NDP_{FC} = NDP_{MP} - \text{NIT}$
 $= 2400 - 800 = 1600 \text{ Crores}$

$NDP_{FC} = \text{Compensation of employees} + \text{Operating surplus} + \text{Mixed income of Self Employed}$
 $1600 = 700 + 200 + \text{Operating Surplus}$
Operating Surplus = 700Cr

2. (a) $MPC = \Delta C / \Delta Y = 7000 - 5000 \div 10000 - 6000 = 2000 / 4000$

$MPC = 0.50$

As we know, $MPC + MPS = 1$

Thus $MPS = 1 - MPC$

$MPS = 1 - 0.50$

$MPS = 0.50$

- (b) Circular flow of income refers to the continuous interlinked phases in circulation of production, income generation and expenditure involving different sectors of the economy. These processes of production, distribution and disposition keep going on simultaneously and enable us to look at national income from three different angles namely: as a flow of production or value added, as a flow of income and as a flow of expenditure. Each of these different ways of looking at national income suggests a different method of calculation and requires a different set of data.

- (c) If the aggregate demand is for an amount of output greater than the full employment level of output, then we say there is excess demand. Excess demand gives rise to an 'inflationary gap'.

- (d) Maximizing social welfare is one of the primary and most commonly manifest reasons for government intervention in the market. However, it is also possible that instead of eliminating market distortions, sometimes government intervention may contribute to generate them. Governments should, therefore, identify and evaluate the inefficiencies that may result from market

failure and the potential inefficiencies associated with deliberate government policies framed to redress market failure.

3.
 - (a) Subsidy is a form of market intervention by government. It involves the government directly paying part of cost to the producers (or consumers) in order to promote the production (consumption) of goods and services. The aim of subsidy is to intervene with market equilibrium to reduce the costs and thereby the market price of goods and services and encourage increased production and consumption. Major subsidies in India are fertiliser subsidy, food subsidy, interest subsidy, etc.
 - (b) Environmental pollution is regarded as a source of market failure because third parties experience negative effects from this activity in which they did not choose to be involved. The social cost exceeds private cost and if producers do not take into account the externalities, there will be overproduction and market failure.
 - (c) Economists use the term 'tragedy of the commons' to describe the problem which occurs when rivalrous but non-excludable goods are overused to the disadvantage of the entire universe. For example, everyone has access to a commonly held pasture; there are no rules about sustainable numbers for grazing. The outcome of the individual rational economic decisions of cattle owners would be market failure because these actions result in the degradation, depletion or even destruction of the resource leading to welfare loss for the entire society.
 - (d) Price floor is defined as an intervention to raise market prices if the government feels the price is too low. In this case, since the new price is higher, the producers benefit. For a price floor to be effective, the minimum price has to be higher than the equilibrium price. For example, many governments intervene by establishing price floors to ensure that farmers make enough money by guaranteeing a minimum price that their goods can be sold for. The most common example of a price floor is the minimum wage. This is the minimum price that employers can pay workers for their labour.
4.
 - (a) Spending multiplier (also known as Keynesian or fiscal policy multiplier) represents the multiple by which GDP increases or decreases in response to an increase and decrease in government expenditures and investment, holding the real money supply constant. Quantitatively, the government spending multiplier is the same as the investment multiplier. It is the reciprocal of the marginal propensity to save (MPS). The higher the MPS, lower the multiplier, and lower the MPS, higher the multiplier.
 - (b) Fiscal policy suffers from limitations such as limitations in respect of choice of appropriate policy, recognition lag, decision lag, implementation lag, impact lag, inappropriate timing, difficulties of forecasting due to uncertainties, possible conflicts between different objectives, possibility of generating disincentives, practical difficulty to reduce government expenditures and the possibility of certain fiscal measures replacing private spending or crowding out private spending.
 - (c) Whenever the central and the state governments' cash balances fall short of the minimum requirement, they are eligible to avail of a facility called Ways and Means Advances (WMA)/overdraft (OD) facility. When the Reserve Bank of India lends to the governments under WMA /OD, it results in the generation of excess reserves (i.e., excess balances of commercial banks with the Reserve Bank). This happens because when the government incurs expenditure, it involves debiting the government balances with the Reserve Bank and crediting the receiver (for e.g., salary account of government employee) account with the commercial bank. The excess reserves thus created can potentially lead to an increase in money supply through the money multiplier process.
 - (d) $M_1 = \text{Currency with public} + \text{Demand Deposits with Banking System} + \text{Other Deposits with the RBI}$
 $= 80000 \text{ crore} + 100000 \text{ crores} + 250000 \text{ crores}$
 $= 430000 \text{ cr}$

5. (a) The factor price equalization theorem postulates that if the prices of the output of goods are equalized between countries engaged in free trade, then the price of the input factors will also be equalized between countries. This implies that the wages and rents will converge across the countries with free trade, or in other words, trade in goods is a perfect substitute for trade in factors. The Heckscher- Ohlin theorem, thus, puts forth that foreign trade eliminates the factor price differentials. The factor price equalization theorem is in fact a corollary to the Heckscher-Ohlin trade theory. It holds true only as long as Heckcher-Ohlin Theorem holds true.
- (b) Dumping is unfair and constitutes a threat to domestic producers and therefore when dumping is found, anti-dumping measures may be initiated as a safeguard instrument by imposing additional import duties/tariffs so as to offset the foreign firm's unfair price advantage. This is justified only if the domestic industry is seriously injured by import competition, and protection is in the national interest (that is, the associated costs to consumers would be less than the benefits that would accrue to producers). For example: In January 2017, India imposed anti-dumping duties on colour-coated or pre- painted flat steel products imported into the country from China and European nations for a period not exceeding six months and for jute and jute products from Bangladesh and Nepal.
- (c) A fixed exchange rate, also referred to as pegged exchange rate, is an exchange rate regime under which a country's government announces, or decrees, what its currency will be worth in terms of either another country's currency or a basket of currencies or another measure of value, such as gold.
- A fixed exchange rate avoids currency fluctuations and eliminates exchange rate risks and transaction costs, enhances international trade and investment, and lowers the levels of inflation. But the central bank has to maintain an adequate amount of reserves and be always ready to intervene in the foreign exchange market.
- (d) **A horizontal direct investment** is said to take place when the investor establishes the same type of business operation in a foreign country as it operates in its home country, for example, a cell phone service provider based in the United States moving to India to provide the same service.
- A vertical investment** is one under which the investor establishes or acquires a business activity in a foreign country which is different from the investor's main business activity yet in some way supplements its major activity. For example, an automobile manufacturing company may acquire an interest in a foreign company that supplies parts or raw materials required for the company.

OR

Import subsidies also exist in some countries. An import subsidy is simply a payment per unit or as a percent of value for the importation of a good (i.e., a negative import tariff).

MOCK TEST PAPER - 2

INTERMEDIATE: GROUP – II

PAPER – 8: FINANCIAL MANAGEMENT & ECONOMICS FOR FINANCE

PAPER 8A: FINANCIAL MANAGEMENT

Answers are to be given only in English except in the case of the candidates who have opted for Hindi medium. If a candidate has not opted for Hindi medium his/ her answers in Hindi will not be valued.

Question No. 1 is compulsory.

Attempt any **four** questions from the remaining **five** questions.

Working notes should form part of the answer.

Time Allowed – 3 Hours (Total time for 8A and 8B)

Maximum Marks – 60

1. Answer the following:

(a) PREPARE a working capital estimate to finance an activity level of 52,000 units a year (52 weeks)

based on the following data:

Raw Materials - ₹ 400 per unit

Direct Wages - ₹ 150 per unit

Overheads (Manufacturing) - ₹200 per unit

Overheads (Selling & Distribution) - ₹100perunit

Selling Price - ₹ 1,000 per unit, Raw materials & Finished Goods remain in stock for 4 weeks, Work in process takes 4 weeks. Debtors are allowed 8 weeks for payment whereas creditors allow us 4 weeks.

Minimum cash balance expected is ₹50,000. Receivables are valued at Selling Price.

(b) Axar Ltd. has a Sales of ₹ 68,00,000 with a Variable cost Ratio of 60%.

The company has fixed cost of ₹16,32,000. The capital of the company comprises of 12% long term debt, ₹1,00,000 Preference Shares of ₹ 10 each carrying dividend rate of 10% and 1,50,000 equity shares.

The tax rate applicable for the company is 30%.

At current sales level, DETERMINE the Interest, EPS and amount of debt for the firm if a 25% decline in Sales will wipe out all the EPS.

(c) Avesh Pvt. Ltd. is considering relaxing its present credit policy for accounts receivable and is in the process of evaluating two proposed policies. Currently, the company has annual credit sales of ₹ 55 lakhs and accounts receivable turnover ratio of 5 times a year. The current level of loss due to bad debts is ₹ 2,00,000. The company is required to give a return of 15% on the investment in new accounts receivable. The company's variable costs are 75% of the selling price. Given the following information, IDENTIFY which is the better policy?

(Amount in ₹)

Particulars	Present Policy	Proposed Policy 1	Proposed Policy 2
Annual credit sales	55,00,000	65,00,000	70,00,000

Accounts receivable turnover ratio	5 times	4 times	3 times
Bad debt losses	2,00,000	3,50,000	5,00,000

(d) The annual report of XYZ Ltd. provides the following information for the Financial Year 2019-20:

Particulars	Amount (₹)
Net Profit	78 lakhs
Outstanding 15% preference shares	120 lakhs
No. of equity shares	6 lakhs
Return on Investment	20%
Cost of capital i.e. (K_e)	16%

CALCULATE price per share using Gordon's Model when dividend pay-out is-

- (i) 30%;
- (ii) 50%;
- (iii) 100%.

[4 × 5 Marks = 20 Marks]

2. The financial advisor of Sun Ltd is confronted with following two alternative financing plans for raising ₹ 10 lakhs that is needed for plant expansion and modernization

Alternative I: Issue 80% of funds with 14% Debenture [Face value (FV) ₹ 100] at par and redeem at a premium of 10% after 10 years and balance by issuing equity shares at $33\frac{1}{3}$ % premium.

Alternative II: Raise 10% of funds required by issuing 8% Irredeemable Debentures [Face value (FV) ₹ 100] at par and the remaining by issuing equity shares at current market price of ₹125.

Currently, the firm has an Earnings per share (EPS) of ₹ 21

The modernization and expansion programme is expected to increase the firm's Earnings before Interest and Taxation (EBIT) by ₹ 200,000 annually.

The firm's condensed Balance Sheet for the current year is given below:

Balance Sheet as on 31.3.2022

Liabilities	Amount (₹)	Assets	Amount (₹)
Current Liabilities	5,00,000	Current Assets	16,00,000
10% Long Term Loan	15,00,000	Plant & Equipment (Net)	34,00,000
Reserves & Surplus	10,00,000		
Equity Share Capital (FV: ₹ 100 each)	<u>20,00,000</u>		
TOTAL	50,00,000	TOTAL	<u>50,00,000</u>

However, the finance advisor is concerned about the effect that issuing of debt might have on the firm. The average debt ratio for firms in industry is 35%. He believes if this ratio is exceeded, the P/E ratio of the company will be 7 because of the potentially greater risk.

If the firm increases its equity capital by more than 10 %, he expects the P/E ratio of the company will increase to 8.5 irrespective of the debt ratio.

Assume Tax Rate of 25%. Assume target dividend pay-out under each alternative to be 60% for the next year and growth rate to be 10% for the purpose of calculating Cost of Equity

SUGGEST with reason which alternative is better on the basis of each of the below given criteria:

- I. Earnings per share (EPS) & Market Price per share (MPS)
- II. Financial Leverage
- III. Weighted Average Cost of Capital & Marginal Cost of Capital (using Book Value weights)

[10 Marks]

3. From the following information and ratios, PREPARE the Balance sheet as at 31st March 2022 and Income statement for the year ended on that date for M/s Ganguly & Co -

Average Stock	₹10 lakh
Current Ratio	3:1
Acid Test Ratio	1:1
PBIT to PBT	2.2:1
Average Collection period (Assume 360 days in a year)	30 days
Stock Turnover Ratio (Use sales as turnover)	5 times
Fixed assets turnover ratio	0.8 times
Working Capital	₹10 lakh
Net profit Ratio	10%
Gross profit Ratio	40%
Operating expenses (excluding interest)	₹ 9 lakh
Long term loan interest	12%
Tax	Nil

[10 Marks]

4. The initial investment outlay for a capital investment project consists of ₹ 150 lacs for Plant & machinery and ₹ 60 lacs for Working Capital. Other details are summarized below:

Sales – 1.5 lakh units of output per year for years 1 to 5

Selling Price - 120 per unit of output

Variable cost - 60 per unit of output

Fixed overheads (excluding depreciation) - 22.5 lakhs per year for years 1 to 5

Salvage value of Plant & machinery Equal to the Written Down Value (WDV) at the end of year 5

Tax rate 40%

Time horizon 5 years

Post tax cut off rate 12%. PVAF (12%,5 Years) is 3.6048.PV @12% 5th year is 0.5674.

Rate of depreciation 20% on the Straight-Line Method (SLM)

Required:

- (a) INDICATE the financial viability of the project by calculating the NPV
- (b) DETERMINE the sensitivity of the project's NPV under each of the following conditions:
 - (i) Decrease in selling price by 10%
 - (ii) Increase in variable cost by 10%
 - (iii) Increase in cost of Plant & machinery by 10%

[10 Marks]

5. (a) The following information is related to Navya Company Ltd. for the year ended 31st March 2022:

Equity share capital (₹ 10 each)	₹ 65,50,000
12% Bonds of ₹ 1,00 each	₹ 60,91,400
Sales	₹ 111 lakhs
Fixed cost (excluding interest)	₹ 7,15,000
Financial leverage	1.55
Profit-volume Ratio	25%
Income Tax Applicable	30%

You are required to CALCULATE:

- (i) Operating Leverage.
- (ii) Combined leverage; and
- (iii) Earnings per share.

Show calculations upto two decimal points.

[8 Marks]

- (b) Write a short note on seed capital assistance. [2 Marks]
6. (a) DISTINGUISH between Net Present Value and Internal Rate of Return. [4 Marks]
- (b) EXPLAIN in brief the features of Commercial Papers. [4 Marks]
- (c) What do you UNDERSTAND by desirability factor/profitability index? [2 Marks]

Or

WRITE a short note on "Cut-off Rate".

PAPER 8B: ECONOMICS FOR FINANCE

Question 1 is compulsory

Students can answer 3 out of the 4 remaining

1. (a) What is the distinction between Production Taxes and Product Taxes? **(3 Marks)**
(b) What is the System of National Accounts (SNA)? **(2 Marks)**
(c) Calculate the Operating Surplus with the help of the following data- **(5 Marks)**

Particulars	₹ in Crores
Sales	3000
Compensation of employees	700
Intermediate consumption	500
Rent	300
Interest	200
Net indirect tax	800
Consumption of Fixed Capital	100
Mixed Income of Self Employed	200

2. (a) Calculate Marginal Propensity to Save (MPS) and Marginal Propensity to Consume (MPC) from the following data: **(3 Marks)**

Income (₹) (Y)	Consumption (₹) (C)
6000	5000
10000	7000

- (b) What is Circular flow of Income? **(2 Marks)**
(c) What do you understand by Inflationary gap? **(2 Marks)**
(d) What are the reasons for government intervention in the market? **(3 Marks)**
3. (a) Why do government gives Subsidies? **(3 Marks)**
(b) Environmental pollution is regarded as a source of market failure: Comment. **(2 Marks)**
(c) What is Tragedy of commons? **(2 Marks)**
(d) Explain the concept of Price Floor? **(3 Marks)**
4. (a) What is Government Spending Multiplier? **(2 Marks)**
(b) What are the limitation of Fiscal Policy? **(2 Marks)**
(c) What is the effect of Government Expenditure on Money Supply? **(3 Marks)**
(d) Calculate Narrow Money (M_1) from the following data **(3 Marks)**

Currency with public	80000 cr
Demand Deposits with Banking System	100000 cr
Time Deposits with Banking System	200000 cr
Other Deposits with RBI	250000 cr
Saving Deposits of Post office saving banks	50000 cr

5. (a) Explain in brief The factor price equalisation theorem? **(3 Marks)**
- (b) What is meant by an 'Anti-dumping' measure? **(3 Marks)**
- (c) What are the advantage of fixed exchange rate regime? **(2 Marks)**
- (d) Distinguish between horizontal, vertical, type of foreign Investments. **(2 Marks)**

OR

What is Import subsidies?