Marking Scheme
CM3CO11 Fundamentals of Financial Management

Q.1 i. Financial Management is mainly concerned with _____. **1**

(a) All aspects of acquiring and utilizing financial resources for firm's activities.

ii. Time value of money indicates that **1**

(a) A unit of money obtained today is worth more than a unit of money obtained in future.

iii. What is the overall (weighted average) cost of capital in the following situation? The firm has Rs.10 Lakhs in Long-Term Debt, Rs.2 Lakhs in Preferred Stock, and Rs.8 Lakhs in Equity, all at market values. The before-tax cost for debt, preferred stock, and common equity forms of capital are 8%, 9%, and 15%, respectively. Assume a 40% tax rate. **1**

(c) 9.3%

iv. For which of the following costs is it generally necessary to apply a tax adjustment to a yield measure? **1**

(a) Cost of Debt

v. Formula for calculation of Degree of Operating Leverage (DOL) is; **1**

(a) Contribution / EBIT

vi. Lower financial leverage is related to the use of additional _____. **1**

(d) Equity Financing

vii. A profitability index (PI) of .92 for a project means that _____. **1**

(a) The project's costs (cash outlay) are (is) less than the present value of the project's benefits

viii. _____ means the rate at which Present Value of cash inflow equals to Present Value of cash outflow. **1**

(a) NPV

ix. To financial analysts, "net working capital" means the same thing as- **1**

(d) Current Assets less Current Liabilities

x. The amount of current assets that varies with seasonal requirements is referred to as _____ working capital. **1**

(a) Temporary

Q2(i) Defn of Financial Mgmt – 2 marks.
(ii) Meaning of Annuity – 1 mark
Types – 2 marks
(iii) 1 marks for Each role – 5 marks

Q3(i) Meaning of Cost of Capital – 1 mark
Significance of Cost of Capital – 2 marks

Q3(ii) Part (a)

Source of finance	Amount	ΣW Propotion	Before tax Cost	ΣX After tax cost	Weighted cost ΣXW (%)
Equity share Capital	4,00,000	20%	20%	20%	4
12% debenture	4,00,000	20%	12%	6%	1.2
18% term loan	12,00,000	60%	18%	9%	5.4
	20,00,000	100			10.6%

Weighted average Cost of capital is 10.6%.

Working note: ke (cost of equity) =

$ke = \frac{D}{MP} \times 100 \Rightarrow \frac{20}{100} \times 100 = 20$

Current market price = 100
dividend is 20

Q3(ii) Part (b)

Source of Finance	Amount	ΣW Propotion	Before tax Cost	ΣX after tax cost	Weighted Cost ΣXW (%)
Equity share Capital	4,00,000	20%	12.5%	12.5%	2.5
12% debenture	4,00,000	20%	12%	6%	1.2
18% term loan	12,00,000	60%	18%	9%	5.4
	20,00,000				9.1%

WACC is 9.1%

Working note: ke (cost of equity)

$\frac{D}{MP} \times 100 = \frac{20}{160} \times 100 = 12.5\%$

MP = 160
D = 20

Q3(iii)

	Amt	ΣW Proportion	Before tax Cost	After tax cost	Weighted Cost (%)
Equity (2,00,000+1,30,000)	3,30,000	66%	12%	12%	7.92
8% debenture	1,70,000	34%	8%	4%	1.36
Total	5,00,000	100			9.28%

Working note: $ke = \frac{D}{MP} \times 100 = \frac{12}{100} \times 100 = 12$

WACC is 9.28%

Q4(i)

$$\text{Operating leverage} = \frac{\text{Contribution}}{\text{EBIT (Operating profit)}}$$

Contribution = EBIT + FC

= 11,50,000 + 7,00,000

= 18,50,000

$$OL = \frac{18,50,000}{11,50,000} = 1.609 \quad \left\{\frac{\text{contribution}}{\text{operating Profit}} = OL\right.$$

$$\text{Financial leverage} = \frac{EBIT}{EBT \text{ or } PBT} = \frac{11,50,000}{3,49,000} = 3.382$$

$$CL = \frac{\% \text{ Change in EPS}}{\% \text{ Change in sales}}$$

$$\text{Operating leverage} \times \text{financial leverage} = \frac{\% \text{ Change in EPS}}{\% \text{ Change in Sales}}$$

$$1.609 \times 3.382 = \frac{\% \text{ Change in EPS}}{5}$$

$$5(1.609 \times 3.382) = \% \text{ Change in EPS}$$

$$27.20\% = \% \text{ Change in EPS}$$

Q4(ii) Computation of leverage: Financial Plan.

	A		B	
	Situation 1	situation 2	situation 1	Situation 2
Contribution	50,000	50,000	50,000	50,000
− Fixed cost	4,000	5,000	4,000	−5,000
EBIT	46,000	45,000	46,000	45,000
− Interest @ 10%	1,500	1,500	500	−500
EBT (PBT)	44,500	43,500	45,500	44,500
OL = Contribution / EBIT	50,000 / 46,000 = 1.09	50,000 / 43,500 = 1.151	50,000 / 45,500 = 1.098	50,000 / 44,500 = 1.1241
FL = EBIT / EBT	50,000 / 44500 = 1.12	50,000 / 43,500 = 1.15	50,000 / 45,500 = 1.098	50,000 / 44,500 = 1.124
CL = OL × FL	1.09 × 1.12 = 1.2208	1.11 × 1.15 = 1.2765	1.09 × 1.098 = 1.196	1.11 × 1.124 = 1.25

Interpretation: Highest value 1.2765 under situation 1 of Plan A

Least value = 1.196 " " 2 of Plan B

Q4(iii)

(i) when EBIT is Rs 50,000

	Plan 1	Plan 2
EBIT	50,000	50,000
less – Int on debt	40,000	40,000
EBT	10,000	10,000
less: tax @ 50%	5,000	5,000
EAT	5,000	5,000
no of Equity shares	10,000	40,000
EPS = EAT / no of Equity Shares	5,000 / 10,000 = 0.50 P	20,000 / 40,000 = 0.5 P.

(ii) when EBIT is 75,000

	Plan 1	Plan 2
EBIT	75,000	75,000
– Int	40,000	-40,000
EBT	35,000	35,000
less tax	17,500	-17,500
EAT	17,500	17,500
no of shares	10,000	40,000
EPS	17,500 / 10,000 = 1.75	17,500 / 40,000 = 0.81

(iii) When EBIT is 1,25,000

	Plan 1	Plan 2
EBIT	1,25,000	1,25,000
– Int	40,000	10,000
EBT	85,000	1,15,000
– less tax	42,500	57,500
EAT	42,500	57,500
no of share	10,000	40,000
EPS =	42,500 / 10,000 = 4.25	57,500 / 40,000 = 1.438

Q5(i)

Calculation of NPV

Year	Cash flows (Rs)	PV @ 7% (discount factor)	Present value of net Cash flow
1	60,000	.94	56,400
2	40,000	.87	34,800
3	30,000	.82	24,600
4	20,000	.76	15,200
		Total Present value of Cash Inflows	1,31,000
		less: Present value of Initial Investment	-1,00,000
			31,000

NPV is 31,000

Q5(ii)

Year	Cash flow	Discounting Factor 10% PVF	PV (Rs)	DF @ 27% PVF	PV (Rs)	DF @ 28% PV	
1	10,000	.909	9090	.787	7870	.781	7810
2	20,000	.826	16520	.62	12400	.61	12200
3	30,000	.751	22530	.488	14640	.477	14310
4	45,000	.683	30735	.384	17280	.373	16785
5	60,000	.621	37260	.303	18180	.291	17460
			116135		70370		68,565

IRR lies between 27% & 28% discounting factor as Initial Investment is 70,000 when PV is 70370, & when it is 28% it is 68565.

Project Y.

Year	Cash flow	DF @ 10% PV	PV (Rs)	DF @ 27% PV	PV (Rs)	28% PV	PV (Rs)
1	50,000	.909	45450	.787	39350	.781	39050
2	40,000	.826	33040	.62	24800	.61	24400
3	20,000	.751	15020	.488	9760	.477	9540
4	10,000	.683	6830	.384	3840	.373	3730
5	10,000	.621	6210	.303	3030	.291	2910
			106550		80780		40580

again it lies between 27% & 28%.

Q5(iii) IRR Concept 3 marks
Example 4 marks

Q6(i) Definition of WC — 1 marks
Explanation of Types — 4 marks

Q6(ii) NAV — 2 marks
Operating cycle - 3 marks

Q6(iii) Statement of WC

		Rs
CA: Stock of Raw material	$(69,000 \times \frac{2}{12} \times \frac{50}{100}) =$	2,87,500
Finished goods	$= (69,000 \times 50 \times \frac{80}{100} \times \frac{3}{12}$	6,90,000
Debtors	$69000 \times \frac{50}{100} \times \frac{80}{100} \times \frac{3}{12}$	6,90,000
	total CA	16,67,500
CL: Outstanding wages	$((69,000 \times \frac{50}{100} \times \frac{10}{100} \times \frac{1}{12})$	(2,875)
Creditors	$[69,000 \times \frac{2}{12} \times \frac{50}{100} \times 50)$	(2875)
	WC	16,35,875