

**Management Accountancy  
Course Part-I Examination  
G-I- P-2 Financial Mngement**

**MAY 2010**

Roll No.....

Total No. of Questions—5]

[Total No. of Printed Pages—8

Time Allowed—3 Hours

Maximum Marks—100

**CEL**

Answer **all** questions.

Marks

1. (a) The Shiba Electrical Supply Company is in the business of supplying transformers to Government and Private Power Plants. The CFO of the company has designed an equation, which, he says, will forecast the sales almost accurately. This equation has been based on some research and the past pattern of monthly sales (in Rs.)

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Equation is Rs. 1,00,000 + (Rs. 2,000 × orders received in previous month)

Following data are presented regarding actual and forecast number of orders :

August (actual)	300
September (forecast)	400
October	600
November	750
December	900

In the first week of September the Sales Manager would like the forecast of sales and income for upto January next year. The Cost Accountant has informed that cost of goods sold is 50% of sales, variable cost is 20% of sales and the fixed cost per month is Rs. 2,00,000.

Prepare a budgeted income statement for the month of September to January.

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P. T. O.

- (b) M/s Rapid Ltd. has the following data for projection for the next 5 years. It has an existing Term Loan of Rs. 360 lakhs repayable over next 5 years and has got sanction for a new Term Loan for Rs. 500 lakhs repayable in 5 years.

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(Rs. in Lakhs)

Particulars	1	2	3	4	5
Profit after tax	480	575	635	650	685
Depreciation	155	150	140	135	120
Taxation	125	203	254	275	299
Interest on Term Loan	162	125	87	50	16
Repayment of Term Loan	178	178	178	178	148

You are required to calculate Debt service coverage ratio, Interest service coverage ratio for each year and average of 5 years.

Also comment on the trend and implications.

- (c) Following information have been collected in an ongoing basis as on 31st December, 2009 :

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(Rs. in Lakh)

Budgeted cost of work schedule	150
Budgeted cost of work performed	140
Actual cost of work performed	44
Budgeted cost of total work	400
Additional cost of Completion	166

Determine :

- Performance variance
- Efficiency variance
- Performance index
- Efficiency index
- Estimated cost performance index.



2. (a) Astha Ltd. wishes to raise additional resources of Rs. 10 lakhs for financing its investment plan. It has a retained earnings of Rs. 2,10,000 available to finance this investment plan. Following details are available : 8

Debt/equity mix	30 : 70
Cost of Debt	
upto Rs. 1,80,000	10% before tax
beyond Rs. 1,80,000	15% before tax
Earnings per share	Rs. 5
Dividend Payout ratio	40% of earnings
Expected rate of growth of Dividend	10%
Current market price per share	Rs. 50
Tax rate	40%

You are required to :

- determine the pattern of raising additional finance,
  - determine the post tax average cost of additional debt,
  - determine the cost of retained earnings and cost of equity, and
  - compute the overall weighted average cost (after tax) of additional finance.
- (b) Following financial data have been furnished by XYZ Ltd. and ABC Ltd. for the year ending on 31st March, 2010 : 6

	XYZ Ltd.	ABC Ltd.
Operating leverage	3 : 1	4 : 1
Financial leverage	2 : 1	3 : 1
Interest charges per annum (Rs.)	12 lakh	10 lakh
Corporate tax rate	40%	40%
Variable Cost as % of sales	60%	50%

Prepare Income statement of the two Companies. Also comment on the financial position and structure of two companies.

- (c) M/s Transformers Ltd. are the manufacturer of transformers. The details of their operations for the current year are as follows : 6

Average monthly market demand (transformers)	2,000
Ordering cost (per order)	Rs. 100
Inventory carrying cost (% p.a.)	20
Cost of transformer (per transformer)	Rs. 500
Normal usage (per week)	100
Minimum usage (per week)	50
Maximum usage (per week)	200
Lead supply time	6-8 weeks

Calculate :

- (i) EOQ. If the supplier is prepared to supply a quarterly 1,500 units at a discount of 5%, is it acceptable ?
  - (ii) Maximum level of Stock
  - (iii) Minimum level of Stock
  - (iv) Re-order level.
3. ABC Ltd. is engaged in the business of three products P, Q and R. Products P and Q are manufactured by the company while product R is procured from outside and sold as a combination with either product P or Q. The volume of Sales budgeted for three products for the current year are as under : 20

Product	Rs. in lakh		
P	1,200		
Q	500		
R	400	(Dec. to March previous year)	Rs. 20 lakh per month
		(April to July current year)	Rs. 25 lakh per month
		(August to November)	Rs. 30 lakh per month
		(December to March)	Rs. 45 lakh per month



Based on the budgeted sales, the cash flow forecast for the company is prepared on the basis of the following assumptions :

- (i) Realisation of sales is considered at
  - 50% current month
  - 25% second month
  - 25% third month
- (ii) Production programme for each month is based on the sales value of the next month
- (iii) Raw material consumption of the company is put at 59% of the month's production
- (iv) 81% of raw materials consumed are components
- (v) Raw material and components to the extent, at 25% are procured through import
- (vi) The Purchases budget is as follows :
  - (a) Indigenous raw materials are purchased two months before the actual
  - (b) Components are procured in the month of consumption
  - (c) Imported raw materials and components are bought three months prior to the month of consumption.
- (vii) The company avails of the following credit terms from suppliers :
  - (a) Raw materials are paid for the month of purchases
  - (b) Company gets one month's credit for its components
  - (c) For imported raw material and components payments are made one month prior to the dates of purchases.
- (viii) Currently, the company has a cash credit facility of Rs. 140.88 lakhs
- (ix) Expenses are given below and are expected to be constant throughout the year :

Wages and Salaries	Rs. 312 lakhs
Administrative Expenses	Rs. 322 lakhs
Selling and Distribution Exp.	Rs. 53 lakhs

- (x) Dividend of Rs. 58.03 lakh to be paid in October
- (xi) Tax of Rs. 23.92 lakh will be paid in four equal quarterly instalments in January, April, July and October
- (xii) The Term Loan of Rs. 237.32 lakh is repayable in two equal investments of 6 months in June/December
- (xiii) Capital expenditure of Rs. 292.44 lakhs for the year is expected to be spreaded equally during 12 months period.

You are required to prepare a Cash Flow statement for the current year period of June to November.

4. (a) Following details are available for a project :

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	(Rs. in crores)
Value of tradeable inputs at domestic prices	700
Value of non-tradeable inputs at domestic prices	180
Value of tradeable inputs at world prices	560
Sales realisation at domestic prices	1,000
Sales realisation at world prices	800

Calculate effective rate of protection of the project and if exchange rate is  $1\$ = \text{Rs. } 48$ , what is the domestic resources cost of the project ?

- (b) PCL Limited is engaged in the manufacturing of power intensive products. As part of its diversification plans, the company proposes to put up a windmill to generate electricity. The details are as follows :

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- (a) Cost of the windmill Rs. 300 lakh
- (b) Cost of land Rs. 15 lakh
- (c) Subsidy from State Government to be received at the end of first year of installation Rs. 15 lakhs
- (d) Cost of electricity will be Rs. 2.25 per unit in year 1. This will increase by Re. 0.25 per unit every year till year 7. After that it will increase by Re. 0.50 per unit.



- (e) Maintenance cost will be Rs. 4 lakh in the year 1 and the same will increase by Rs. 2 lakh every year
- (f) Estimated life 10 years
- (g) Cost of Capital 15%
- (h) Residual value of windmill will be zero. However, land value will go up to Rs. 60 lakh at the end of year 10
- (i) Depreciation will be 100% of the cost of the windmill in the year 1 and the same will be allowable for tax purpose
- (j) As windmills are expected to work based on wind velocity, the efficiency is expected to be an average 30%. Gross electricity generated at this level will be Rs. 25 lakh units per annum, 4% of this electricity generated will be committed free to the state as per the agreement
- (k) Tax rate 50%.

From the above, you are required to :

- (a) Calculate the net present value (ignore tax on capital profits)
- (b) List down two non-financial factors that should be considered before taking this decision.

You can use following discount factors :

Year	:	1	2	3	4	5	6	7	8	9	10
Discount factors	:	0.87	0.76	0.66	0.57	0.50	0.43	0.38	0.33	0.28	0.25

5. (a) Following regression line is available for the stock of XYZ Ltd. 10

$$r_{it}(\%) = a_i + \beta_i r_{mt} + e_{it}$$

The regression line explains only 80% of the variation in the return on XYZ Ltd.'s stock. The variance in market return is 95(%)<sup>2</sup>. The covariance of stock return with that of market is 110(%)<sup>2</sup>.

- (a) Find out systematic and unsystematic risk of XYZ Ltd. stock
- (b) Whether the stock is defensive or aggressive ?

- (b) Mr. Akhtar is holding two bonds A and B which pay an annual coupon of 6% and 8% and their terms of maturity are 4 and 5 years respectively. The face value and maturity value of the bonds is Rs. 100. Spot rates prevailing in the market as indicated by yield curve are 10

Maturity (years)	Spot rates (%)
1	4.00
2	5.00
3	5.60
4	6.10
5	6.75

You are required to calculate :

- The expected change in the prices of bonds A and B using the duration concept for a 0.40% change in yield to maturity
- The one year holding period on the bonds assuming that spot rates will rise in twelve month's time by 0.15%, across the maturity spectrum.