BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE PILANI, K. K. BIRLA GOA CAMPUS
Second Semester 2022-23, Comprehensive Examination

Total Time: 3 Hours | **Total Marks: 40**
ECON FIN F315 | **12 May 2023**

SECTION – A: 25 Marks (Answer on Main Answer script)

Answer All Questions. Figures to the right indicate full marks

Q.1) The projected Income statement of **XYZ Ltd**. for the year 2023-24 is under.(All figures Rs. Crores)

Gross Sales		900
Raw material consumed	360	
Wages	162	
Other conversion cost	90	
Administrative expenses	42	
Selling expenses on domestic sales	24	
Depreciation	20	
Primary Packing charges	30	
Packing and other exp for export	10	
GST @ 8% on domestic sales	48	
Income tax	60	846
Profit after tax		54

Assume that raw material and all expenses (other than specific) are incurred proportionately for domestic and export sales

You are informed that:

1. Account receivable both export and domestic are valued at actual cost.
2. WIP is valued at factory cost, assuming the consumption 100 % of raw material and other expenses being incurred evenly.
3. Credit allowed on domestic sale is 2 months and export sales is 4 months.
4. Finished goods remain in stock for one month, raw material remains in stock for one and half months and WIP remains in stock for half a month.
5. Credit allowed by suppliers is half a month. Lag in payment of all expenses including GST(other than packing and other charges for export)t is one month.
6. Minimum required cash balance is Rs 2 crores.

You are required to:

a) Estimate the net working capital requirement for the company for the year 2019-20.
b) Calculate the **Maximum permissible bank finance,** if the stipulated margin is 25% on net raw material holding and total finished goods holding and 40%on domestic receivable and zero margin on export receivable. **(6 Marks)**

Q.2)."2/10, net 30" is the present credit term of **Welldone Ltd**, Its present level of sales is Rs. 6, 00,000, with an average collection period of 30 days. The contribution margin ratio is 15 per cent. The proportion of sales on which currently customers take discount is 1 per cent. The company's cost of capital is 10 per cent. Now the company is considering to increase the discount term to "4/10, net 30", which is expected to push up sales to Rs. 6,50,000 and reduce the average collection period by 10 days. Such relaxation increases the proportion of discount sales to 2 per cent. Determine the residual income with the assumption of 20 per cent tax rate. **(2 Marks)**

Q.3) Easy lease Limited has decided to lease an equipment to X Ltd. The Cost of the equipment net of GST is Rs 80 lakhs. The equipment is expected to have an useful life of 6 years . Assume this can be sold for Rs 4 lakhs. Tax rate is 25% .Depreciation is at 20% on WDV basis. If the expected return of Easy Lease Limited is 12%. Calculate the yearly lease rental to be charged to X Ltd. Consider the tax implication if any on the sale of scrap **(3 Marks)**

Q.4) You are appointed as a CFO in a manufacturing unit with evenly spread production. You find that the company, at present, is placing the order of annual requirement of raw material on quarterly basis. To minimise the total cost of holding inventory you suggest that order be placed in the most economical lot. The following data is available

Present production	1,00,000 units per annum
Yield rate per kg of Raw material	2.5 units
Ordering and inspection cost	Rs 125 per order
Inward freight per order	Rs 625
Cost of storage per month	Re 0.50 per kg
Cost of finance	Rs 9 per kg per annum

According to you what is the quantity to be placed in each order ?
With your suggestion what is the annual saving to the company **(3 Marks)**

(EITHER)

Q.5) TELEVISTA LTD is a highly profitable firm. It has a proposal to manufacture smart phones which has product life of 4 years. The project cost involves an investment in machinery Rs 600 lacs The annual capacity of the plant is to make 50,000 sets. The unit price of the set net of GST will be Rs 12000.
Relevant cost details are as under:-
Material cost is 50% of net sales.
Labour cost is 800 per unit, variable over head is Rs 100 per unit
Selling expenses is 20% of net sales
The fixed cost (excluding depreciation) will be Rs 300 lacs per annum. The company would have to incur promotion expenses of Rs 120 lacs in the first year. Tax free investment subsidy of Rs 100 lacs will be received at the end of third year. Depreciation rate is 25% on WDV. **(5 Marks)**

(OR)

Q.5). From the following information relating to FINMAN Ltd, you are required to prepare a cash budget for the forthcoming 3 months viz., May, June and July. The management wishes to maintain a cash balance of Rs. 20 lakhs at all times. Determine whether borrowing will be necessary during the period and if so when and for how much. As of April 30th, the company had a bank balance of Rs.20 lakhs.

Month	**Actual sales (Rs. In lakhs)**	**Month**	**Forecasted sales (Rs. in lakhs)**
January	50	May	70
February	50	June	90
March	70	July	120
April	80	August	100

- 20% of the sales are for cash. Credit Sales are collected as 50% at a discount of 2% in the month of sales and balance equally in subsequent two months with an interest of 12 pa.
- cost of goods sold is 60% of sales. 40% of which is purchased in the month of sales and the balance in the preceding month(ignore stock holding)
- Selling and Administrative Expenses are fixed Rs. 4 lakhs per month plus 10% of cost of goods sold. during the month. All these expenses are paid during subsequent month of sale.

- Interest payments: Half yearly interest payments on Rs.300 lakhs borrowings @ 18% per annum in January and July.
- Dividends: Rs 10 lakhs dividend is expected to be declared and paid in July.
- Capital expenditure: Rs.40 lakhs is expected to be invested in Plant and Machinery in June.
- Income Tax payment of Rs. 20 lakhs will be made in July.

Borrowing should be in the multiple of 1 lac at an interest of 15 p.a. and repaid as when cash is available. **(5 Marks)**

Q.6) An agriculturist has 480 hectares of land on which he grows potatoes, tomatoes, peas and carrots. Out of the total area of land, 340 hectares are suitable for the four vegetables but the remaining 140 hectares of land are suitable only for growing peas and carrots. Labour for all kinds of farm work is available in plenty.
The market requirement is that all the four types of vegetables must be produced with a minimum of 5,000 boxes of any one variety. The farmer has decided that the area devoted to any crop should be in terms of complete hectares and not in fractions of a hectare. The only other limitation is that not more than 1, 13,750 boxes of any one vegetable should be produced.
The relevant data concerning production, market prices and costs are as under

	Potatoes	Peas	Carrot	Tomatoes
Annual yield:				
Boxes per hectare	350	100	70	180
	Rs.	**Rs.**	**Rs.**	**Rs**
Costs:				
Direct Material per hectare	952	432	384	624
Direct labour:				
Growing per hectare	1,792	1,216	744	1,056
Harvesting and packing	7.20	6.56	8.80	10.40
per box	10.40	10.40	8.00	19.20
Transport per box	30.76	31.74	36.80	44.55
Market price per box				Rs.
Fixed expenses per annum:				1,24,000
Growing				75,000
Harvesting				75,000
Transport				1,50,000
General administration				

It is possible to make the land presently suitable for peas and carrots, viable for growing potatoes and tomatoes if certain land development work is undertaken. This work will involve a capital expenditure of Rs.6, 000 per hectare which a Bank is prepared to finance at the rate of interest of 15 % p.a. If such improvement is undertaken, the harvesting cost of the entire crop of tomatoes will decrease on an average by Rs. 2.60 per box. Required:

(i) Calculate, within the given constraints, the area to be cultivated in respect of each crop to achieve the largest total profit and the amount of such total profit before land development work is undertaken.

(ii) Assuming that the constraints continue, advice the grower whether the land development scheme should be undertaken and if so the maximum total profit that would be achieved after the said development scheme is undertaken. **(6 Marks)**

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SECTION – B: 15 Marks (Answer on Supplement Answer script)

Q7) The following figures are collected from the annual report of XYZ Ltd.:

Net profit	Rs 40,00,000
Outstanding 12% preference shares	Rs 100,00,000
Number of equity shares	3,00,000
Return on investment	20%
Cost of capital	15%

Compute price per share using Gordon's model when the dividend payout ratio is (i) 35% and (ii) 100%. **[5 Marks]**

Q8) The following information is provided about Company A and B:

	Company A	Company B
Output (in units)	60000	15000
Fixed cost (in rupees)	7000	14000
Variable cost (in rupees)	0.2	1.5
Interest on borrowed funds (in rupees)	4000	8000
Selling price per unit	0.6	5.00

A. Calculate the Degree of Operating Leverage, Degree of Financial Leverage and the Degree of Combined Leverage. **[6 Marks]**
B. Comment on the risk factor with relation to each company. **[1 Mark]**

Q9)
(a) Earnings per Share is Rs. 5, and the rate of return required by its shareholders is 16 percent. Assuming Gordon's valuation model, what rate of return should be earned on investment to ensure that the market price of its share is Rs. 50, and the Dividend pay-out is 40 percent? **[2 Marks]**
(b) If degree of financial leverage is 3 and there is 15% increase in EPS, calculate EBIT. **[1 Mark]**