

## BUSINESS ANALYSIS

Time allowed – 3 hours  
Total marks – 100

*[N.B. – Figures in the margin indicate full marks. Question must be answered in English. Examiner will take account of the quality of language and the way in which the answers are presented. Different parts, if any, of the same question must be answered in one place in order of sequence.]*

1. a. “A complete awareness of the organisation’s environment and its internal capacities is necessary for a rational consideration of future strategy” Discuss the importance of SWOT analysis for preparing the future strategy of an organisation. 8
- b. You have been recently appointed as a Finance Manager of an industrial unit located at Chittagong. Your head of the Unit, a non-finance man, called you and had the following conversation with you.
- Before your joining we have sent a project to the head office with projected cash flows. One of the senior finance staff of head office has discounted our figures using a rate which is calculated from the capital asset pricing model. I do not know why he has discounted the figures as there is negligible inflation over the next few years. I think this is a ploy to stop our project and let another unit to take the benefit.
- I read a finance book and gone the chapter capital asset pricing model but I could not make head or tail of it. It seems to me it is related to buy share not related to our project. We prefer payback which is less than five years for the project which is below our acceptable level.
- There will be a meeting in the head office in Dhaka tomorrow on this project. I am very keen to go ahead with this project as I feel it will secure our job and future prospects. I do not know much about finance,
- Please write a note for me how Capital asset pricing model is supposed to work, plus any other things you feel I should present in the meeting to justify the project.
- Requirement:  
Write a note for the Head of unit why CAPM is important for business decisions and how it is helpful in taking business decisions. Also suggest what other issues should be considered for accepting the project. 12

2. (a) “A risk averse investor is one who requires a higher average return in order to take on a higher level of risks.” Explain the statement. 5
- (b) Modern Engineering Ltd. leases a factory in Chittagong where, among other products, it makes a component, known as the ZEL, which is used in shipbuilding and sold to the shipbuilders worldwide. The factory’s lease expires on 31 December 2017, so the company intends to review the future of all of its production there in anticipation of that event. Meanwhile the immediate future of ZEL production is in doubt. Some members of the company’s management team believe that recent development of shipbuilding design have rendered the ZEL an uneconomic prospect for the company during the four years 1 Jan 2014 to 31 Dec 2017. As member of the company’s finance staff you have been asked to make an assessment of the economic viability of the ZEL over the next four years on the basis of net present value. It seems fairly certain that, irrespective of the short term future of the ZEL, its manufacture will not be continued beyond 2017.

Estimated sales demand for ZEL over the next four years ending 31 December at a unit selling price of Tk. 35,000 is as follows:

Year	Units
2014	500
2015	500
2016	400
2017	300

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It is believed however, that were a modification to be made to the design of the ZEL, demand could be raised to 700 units in each of the first two years, but this modification would have no effect on demand for 2016 and 2017. The modification could be effected by 31 December 2013. It would cost Tk. 8 million payable on 31 December 2013, and this amount would be fully allowable for corporation tax for the year in which this expenditure would be incurred.

The factory is leased for a fixed Tk. 6 million per annum payable annually in advance.

The direct, variable manufacturing costs of each ZEL are as follows;

Direct labour	Tk. 4000
Raw materials and bought in parts	Tk. 7000

The company generally operates a just-in-time inventory holding policy, which means that the inventories of nearly all of the materials and parts are negligible. In the case of one bought-in-part, however, there will be an inventory of 1000 unit at 1 January 2014. This arose because, early in 2013, the company was offered a special deal on this item provided that it was prepared to make a bulk purchase. This bought-in-part is included in the raw material and bought-in parts total above at its normal price of Tk. 1,000 per unit. Each ZEL requires the use of one of these parts and this part can be used only in the manufacture of ZELs. The bulk purchase was made at a price of Tk. 800 per unit. If ZEL production were not to continue, the inventory could be sold for Tk. 600 per unit on 31 December 2013 for immediate cash settlement. Any necessary tax adjustments resulting from this inventory can be ignored.

Ceasing ZEL production would release 25% of the factory space, but this could not be used for any other activity. The labour released could, however, be transferred to another department of the factory for work on another of the company's products. Demand for that products exceeds the ability of the company to meet it due to a shortage of labour, a shortage which would otherwise persist throughout the four years. For every Tk 1 worth of labour transferred, it is estimated that a contribution (sales revenue less direct labour and materials) of Tk. 3 could be generated. The possible additional sales of ZELs during 2014 and 2015, should the modification be undertaken, would not affect the output of the other product.

Plant bought for Tk. 10 million on Jan 2012, is used in the manufacture of ZELs. It could be disposed of on 31 December 2013 for an estimated Tk. 6 million. By 31 December 2017 it would be expected to have no market value. This plant was the subject of an election to be treated as a short-life-asset and excluded from the pool. This means that it attracted 25% (reducing balance) tax depreciation in the year of its acquisition and in every subsequent year of its being owned by the company, except the last year. In the last year the difference between the plant's written down value for tax purposes and its disposal proceeds will either be allowed to the company as an additional tax relief, if the disposal proceeds are less than the tax written down value, or be charged to the company if the disposal proceeds are more than the tax written down value.

It is estimated that overheads (excluding lease payments) apportioned to ZEL total Tk. 5 million per annum. Of this amount Tk. 2 million can be avoided by ceasing ZEL production.

The company's accounting year end is 31 December. The corporation tax rate is expected to be 30% throughout the period concerned. Tax can be assumed to be payable at the end of the year in which the event giving rise to it occurs.

There are no other incremental cash flows associated with ZEL production and sales. All cash flows can be treated as occurring on the last day of the year to which they relate, unless specified otherwise. The company uses its after-tax long-term borrowing rate of 5% per annum to assess projects, and you are expected to follow this approach.

Requirements;

- a) Assuming that ZEL production and sales continue until 2017, assess whether it would be economically viable to pay for the modification to the design of the product. 10
- b) Using the results from (a), prepare a statement which shows the annual relevant cash flows associated with a decision on whether on the basis of net present value to cease production of ZELs at 31 December 2013 or to continue production until 31 December 2017. 12
- c) Discuss the suitability of using the long term borrowing rate as the discount rate for project evaluation. 3

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3. Mobin Trading Corporation Ltd. (MTC) is a prosperous private company, whose owners are also the directors. The directors have decided to sell their business and have begun to search for organizations interested in its purchase. They have asked for your assessment of the price per ordinary share a purchaser might be expected to offer. Relevant information as follows:

Most recent statement of financial position:

	(in '000 Tk.)
Non-current assets (carrying amount):	
Land and buildings	800
Plant and equipment	450
Motors and vehicles	55
Patents	<u>2</u>
	1307
Current Assets:	
Inventory	250
Receivables	125
Cash	<u>8</u>
	383
Current liabilities	
Payables	180
Taxation	<u>50</u>
	230
Net current assets	<u>153</u>
Total assets	<b>1460</b>
Long term liability	
Loan secured on property	<u>400</u>
	1060
Share capital (300,000 shares of Tk 1 each)	300
Reserves	<u>760</u>
	1060

The profit after tax and interest but before dividends over the last five years have been as follows:

Yr	Tk.
1	90,000
2	80,000
3	105,000
4	90,000
5	100,000

The company's five year plan forecasts an after –tax profit of Tk. 100,000 for the next 12 months, with an increase of 4% year over each of the next four years. The annual dividend has been Tk. 45,000 for the last six years.

As part of their preparations to sell th company, the directors of MTC have had the non-current assets revalued by an independent expert, with the following results:

Land and buildings	1075,000
Plant and equipment	480,000
Motor vehicle	45,000

The gross dividend yields and P/E ratios of three quoted companies in the same industry as MTC over the last three years have been as follows:

	A		B		C	
	Div yld %	P/E ratio	Div yld%	P/E ratio	Div yld%	P/E ratio
Recent year	12	8.5	11.0	9.00	13.0	10.0
Previous year	12	8.0	10.6	8.5	12.6	9.5
Three years ago	12	8.5	9.3	8.0	12.4	9.0
Average	12	8.33	10.3	8.5	12.7	9.5

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Large companies in the industry apply an after tax cost of equity of about 18% to acquisition proposals when the investment is not backed by tangible assets, as opposed to a rate of only 14% on the net tangible assets.

Your assessment of the net cash flows after interest and tax which would accrue to a purchasing company, allowing for the capital expenditure required after the acquisition to achieve the company's target five year plan, is as follows:

Year	Tk.
1	120,000
2	120,000
3	140,000
4	70,000
5	120,000

Requirement:

- (i) What would be the value of the business under the different valuation methods? 15  
 (ii) Which one should be more preferable? Why? 5

4. (a) What are various types of risk in portfolio planning? 4  
 (b) Write short note on Appraisal of projects under inflationary conditions. 6  
 (c) A company is considering two mutually exclusive projects A and B Project A costs Taka. 30,000 and Project B Taka. 36,000. You have been given below the net present value, probability distribution for each project:

Project A		Project B	
NPV Estimate Taka	Probability	NPV Estimate Taka	Probability
3000	0.1	3000	0.2
6000	0.4	6000	0.3
12000	0.4	12000	0.3
15000	0.1	15000	0.2

- (i) Compute the risk attached to each project i.e., Standard Deviation of each probability distribution. 12  
 (ii) Which project do you consider more risky and why? 8