



Managerial and Financial Analysis

Instructions to examinees:

- (i) Answer all **NINE** questions.
- (ii) Answer in **black** pen only.
- (iii) Multiple Choice Questions must be answered in answer script only.

Section A

Q.1 Select the most appropriate answer from the options available for each of the following Multiple Choice Questions.

- (i) A sales person of a large clothing store is given the task to determine the most frequently sold item last week. In order to complete the task, he retrieves the list of all the individual items sold last week. Which central tendency measure should the sales person use to complete the task?
 - (a) Mean
 - (b) Median
 - (c) Mode
 - (d) Harmonic Mean

(01)
- (ii) Irfan downloaded a data file from a website to check the historical trends of Pakistan Rupee against US dollar. After a short while, he was shocked to find that the downloaded data file is present in all folders of the computer. This situation is caused by:
 - (a) Worms
 - (b) Trap doors
 - (c) Logic bombs
 - (d) Denial of service

(01)
- (iii) Which of the following represents 'pure risk' for a business?
 - (a) Investment in a volatile share listed on Pakistan Stock Exchange
 - (b) Entering into a finance lease agreement at a fixed rate of interest
 - (c) Purchasing USD for a future payment to be made in USD
 - (d) Entry of a highly resourced competitor

(01)
- (iv) Which **TWO** of the following justify that equity investment is riskier than investment in the debt capital of the same company?
 - (a) Providers of debt capital have a contractual right to collect cash flows
 - (b) Debt capital generally provides much better return than equity investment
 - (c) Earnings per share can be volatile
 - (d) Providers of debt may ask any time to pay the debt in full

(01)
- (v) Which of the following is **NOT** considered as cash flows to calculate an IRR of redeemable debt?
 - (a) Annual interest payment on the bond
 - (b) Tax relief on annual interest payments
 - (c) Par value of the bond, excluding any interest payable in near future
 - (d) Redemption amount

(01)
- (vi) The Islamic mode of financing in which the seller expressly mentions the cost of a commodity sold and sells it to another person by adding mutually agreed profit is called:
 - (a) Ijarah
 - (b) Murabaha
 - (c) Mudaraba
 - (d) Musharaka

(01)

- (vii) A cotton producer estimates 20 tons of cotton will be available for sale in three months' time. He gathers the following information for the purpose of hedging using futures:
- Futures contract for one ton of cotton with three months to expiry is at Rs. 31,500.
 - Producer will sell 20 futures at Rs. 31,500, as the standard contract size is one ton.

After three months, price of cotton is expected to be Rs. 32,500 per ton.

What is the cotton producer's effective rate per ton if he decides to hedge through futures?

- (a) Rs. 30,500 (b) Rs. 33,500 (c) Rs. 32,500 (d) Rs. 31,500 **(02)**
- (viii) Which of the following is the coincident economic indicator?
- (a) Industrial production (b) New private house building permits
(c) Unemployment (d) Balance of trade **(01)**
- (ix) Due to easy availability of internet, businesses are using M-Commerce as an effective tool for increasing their revenue. Which of the following sales is **NOT** related to M-Commerce?
- (a) Purchasing cell phone credit directly from the vendor application
(b) Mobile banking application
(c) Ordering food by calling the restaurant
(d) Purchasing digital content on a mobile device **(01)**
- (x) Which of the following examples, best reflects product differentiation?
- (a) Sale of goods only in the high-end locality
(b) Restaurant giving an option to the customers to customize the ingredients of the dish
(c) Bread manufacturer has also started producing meat related products
(d) Marketing through different advertisement mediums **(01)**

Use the following scenario for answering MCQs (xi), (xii) and (xiii):

Rehan Baig, a newly hired assembly line manager, feels that the average time it takes the worker to complete the task is higher than the commonly accepted 10 seconds or less. To test his claim, he measures the task time of 15 workers. The results show an average time of 11.4 seconds with standard deviation of 2.5 seconds.

- (xi) The hypothesis for the test conducted is:
- (a) $H_0: \mu \leq 10$ seconds, $H_A: \mu > 10$ seconds
(b) $H_0: \mu \geq 10$ seconds, $H_A: \mu > 10$ seconds
(c) $H_0: \mu \leq 10$ seconds, $H_A: \mu < 10$ seconds
(d) $H_0: \mu = 10$ seconds, $H_A: \mu > 11.4$ seconds **(1.5)**
- (xii) The test statistic calculated is:
- (a) 2.17 (b) 1.55 (c) 2.25 (d) 1.77 **(1.5)**
- (xiii) The critical value calculated at 95% confidence level for this test is 1.761. Therefore, it can be deduced that the true mean task time is:
- (a) equal to or less than 10 seconds (b) equal to or greater than 10 seconds
(c) less than 10 seconds (d) greater than 10 seconds **(01)**

- Q.2 WMB is a large multi-national automobile company that has automobile assembly plants in over twenty-four countries including Rawada where it holds the largest market share by reach and revenue. Rawada's government is considering to put a complete ban on imports of all automobiles and their parts in order to promote local automobile manufacturers, which is going to have an adverse impact on WMB's operations in Rawada.

Required:

Explain any **four** approaches that WMB can use to influence government to re-think its stance of complete ban on imports of all automobiles and their parts. Also provide an example for each approach.

(08)

- Q.3 Northern Hotels Limited (NHL) is planning to build a new resort alongside a lake in Baboon Valley (Valley), a remote area of Pakistan. Although the Valley is known for its scenic views, it is largely cut-off from other areas of Pakistan due to its poor infrastructure. There is no sewerage system in the Valley and all the bio-waste created by the locals is put to organic use. People residing in the Valley have been living there below the poverty line.

NHL has obtained all the relevant government approvals. As part of the approval, NHL will build proper road infrastructure leading to the resort. NHL has also been able to enter a deal for the land at a significantly lower market price.

NHL expects to achieve its objective of high profits due to very low operational costs as the labour is available in the Valley at a significantly reduced rate. On the other hand, the locals have also foresighted that this will bring tourism in the area and will create greater earning opportunities.

Required:

Apply the Tucker's 5-question model on the above scenario.

(06)

- Q.4 Rauf Baweja (Rauf) is the owner of a chain of computer stores, named Complus, that sells computer parts and accessories throughout the city. Rauf sources all its products from a large wholesale supplier situated in Saddar, Karachi. The supplier has an outlet and online store where people can select and order the products. At the start of every week, Rauf visits the supplier's online store, selects and orders inventory for the rest of the week. Upon receiving the payment for products and delivery charges, the supplier sends them directly to each Complus store according to the requirements received from Rauf.

All Complus stores follow a standardized layout. When the products reach the store, the staff places a price tag, stacks and organises the products in a standard fashion. The standard processes make it easy to transfer a well-trained staff member from one store to the other. This also makes it easy for a customer to walk into any Complus store and locate the desired product where they will always find a well-trained staff ready to help.

Complus has a strong marketing team that frequently runs social media campaigns, SMS messages and TV adverts to inform customers about the products and discounts. Complus also has an aftersales customer helpline that assists customers with common queries and collects their feedback. Lately, there have been mounting customer complaints of faulty products upon first use and Rauf is looking for ways to solve it.

Required:

- (a) Perform Porter's primary value chain analysis of Complus. Your analysis should include explanation of each element of value chain and activities being performed under that element.
- (b) Recommend a value addition activity that would reduce customer complaints of faulty products. Also explain its position(s) in Porter's primary value chain.

(10)

(03)

Q.5 Barganza Limited (BL) manufactures and markets four consumer durable products. Presented below are the main costs incurred on each of the products:

- Product A: Costs of setting up and expansion of distribution channels
- Product B: Costs of withdrawals
- Product C: Marketing and product enhancement costs to extend product life cycle
- Product D: Increased costs of working capital

Required:

- (a) Identify and explain the stage of product life cycle for each product. (06)
- (b) From your answer to (a) above, for each product:
- (i) provide one more cost, other than marketing and advertising cost, that is likely incurred. (03)
- (ii) suggest a promotion strategy BL may pursue. (04)

Section B

Q.6 Islamabad Universe (IU) is engaged in production and sales of various consumer products. The management is in the process of launching a new product 'Gladiator'. You have been provided the following information in this regard:

- (i) IU has outsourced the due diligence of Gladiator at the cost of Rs. 250,000 which is payable shortly.
- (ii) A specialized machine costing Rs. 25 million would be needed for the production of Gladiator. The machinery would be financed by a bank loan that would carry interest rate of 12% per annum.
- (iii) The machine would be expected to produce 10,000 units in the first year of its operation. However, the production would reduce by 10% and 15% in the second and third years respectively. At the end of third year, an overhauling would be carried out at the cost of Rs. 2.5 million. This would result in continuation of third year's production in the fourth and fifth years.
- (iv) The selling price and cost of goods sold (other than depreciation) of Gladiator would be Rs. 1,600 and Rs. 750 per unit respectively.
- (v) The fixed operating cost of producing Gladiator would be Rs. 1 million per annum, whereas variable operating cost would be Rs. 100 per unit.
- (vi) The machine would have an estimated useful life of five years, after which it could be scrapped for Rs. 5 million. The machine and overhauling costs would be subject to tax depreciation of 25% on reducing balance method.
- (vii) The applicable tax rate would be 30% and tax would be payable/refundable in the year in which the liability/asset would occur.
- (viii) All revenues and costs are quoted on today's rate. The estimated annual inflation of 8% would be applicable for all revenues and costs that arise from first year and onwards.
- (ix) There are no opening or closing inventories of Gladiator in any of the five years.

Required:

By using net present value method, determine the discount rate at which launching of Gladiator would be financially feasible. *(All cash flows occur at the end of year unless otherwise specified)* (12)

Q.7 Multan Star (MS) is engaged in manufacturing and selling of a single product K-100.

The management is in the process of preparing its budgeted profit or loss statement for the year ending 31 August 2023. Following information is available in this respect:

Information for the year ended 31 August 2022

(i) Extracts from profit or loss statement:

	Rs. in '000
Sales	90,000
Cost of goods sold:	
Material	(36,000)
Labour	(25,000)
Manufacturing overheads	(9,000)
Gross profit	20,000
Selling and administration expenses	(2,500)
Profit before tax	17,500

- (ii) During the year, MS operated at 80% of its machine production capacity. It manufactured and sold 72,000 units of K-100. Each unit of K-100 requires 3 hours of machine time.
- (iii) 2.5 kg of material is required for manufacturing of each unit of K-100.
- (iv) Each unit of K-100 requires three labour hours. Labour is hired under a third party contract according to which MS has to pay for a minimum of 250,000 labour hours. However, each hour exceeding 250,000 hours would be paid at two times of standard labour rate per hour.
- (v) 20% of total manufacturing overheads are fixed. Variable manufacturing overheads are absorbed on the basis of machine hours.
- (vi) All selling and administration expenses are fixed.
- (vii) There are no opening or closing stocks of raw material and finished goods.

Information and projections for the budget for the year ending 31 August 2023

- (i) MS would introduce the mini version of K-100 under the name of K-50. The demand for K-50 is expected to be 25,000 units. The selling price of K-50 would be Rs. 750 each.
- (ii) The introduction of K-50 would not affect the existing demand for K-100. In addition, MS has entered into a contract with a new customer for supply of 10,000 units of K-100 at the last year's prevailing price.
- (iii) Any constraint due to production capacity would be met by reducing the production of K-100. However, any shortfall in production of K-100 would be met by purchasing it from the market at a price of Rs. 1,200 per unit.
- (iv) The selling price of K-100 (other than already contracted to supply) would increase by 12%.
- (v) Each unit of K-50 would require 1 kg of material, 1.5 hours of machine and 1.5 hours of labour. The production of K-50 would result in increase in selling and administration expenses by 20% other than the inflation.
- (vi) All expenses unless otherwise specified are subject to inflation of 5%.

Required:

Prepare a budgeted profit or loss statement for the year ending 31 August 2023.

(12)

Q.8 Assume today is 1 September 2022.

On 1 September 2022, Karachi Kites Limited (KK) plans to hedge the market rate risk of an export receipt amounting to USD 2,000,000 which is expected to be received on 30 November 2022. The current spot price per USD is Rs. 208.

KK intends to hedge the currency risk through futures. A future contract is for USD 120,000 and is available in standard lot size of 1 with a tick value of Rs. 12. Following future rates are available:

Future	Rate	Maturity Date
October future	Rs. 210.5/USD	31 October 2022
November future	Rs. 213.5/USD	30 November 2022
December future	Rs. 215.5/USD	31 December 2022

The spot rate on 30 November 2022 is expected to be Rs. 218.5.

Required:

- (a) Set up the hedge for USD receipt. (02)
- (b) Compute the gain/loss in term of ticks. (02)
- (c) Compute the effective exchange rate for KK. (02)

Q.9 Lahore Quotient (LQ) is engaged in manufacturing and selling of textile products. LQ is presently considering to expand the business and needs finance of Rs. 50 million. The management is considering the following two options:

Option I: Issuance of new shares

Finance the entire expansion by issuing new shares. However, the new project would result in equity beta of 1.2.

Option II: Issuance of convertible bonds

Finance the entire expansion by issuing 10% convertible bonds of Rs. 1,000 each. Each bond will be converted into 3 shares at the end of year 4. The market value of each share is expected to be Rs. 400 on the date of redemption.

Following information has been extracted from the latest financial statements of LQ:

	Rs. in '000
1,000,000 ordinary shares (Rs. 100 each)	100,000
11% bank loan	100,000

Other information:

- (i) The return on government bonds is 8% per annum, whereas, the average return on market investments is 12% per annum. The current equity beta for LQ is 1.3.
- (ii) Applicable tax rate to LQ is 30%.
- (iii) The details of dividend paid during the last four years (including current year 2022) are given below:

Years	2019	2020	2021	2022
Dividend per share	Rs. 10	Rs. 11	Rs. 12	Rs.14

Required:

- (a) Compute LQ's existing weighted average cost of capital. (05)
- (b) Recommend whether LQ should finance the new project by issuing new shares or by issuing convertible bonds. (06)
- (c) Discuss any **four** factors that LQ may need to consider before deciding on whether to finance the expansion by issuing new shares or convertible bonds. (04)

(THE END)