



Managerial and Financial Analysis

Instructions to examinees:

- (i) Answer all **TEN** 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) Degree program of Universal University requires more than 60% marks for final year project. A total of 8 groups presented their final year projects and secured following marks out of 45 marks:

30, 43, 35, 37, 25, 38, 40, 32

What are the mean, median and mode of the above data?

- (a) 35, 36, 37 (b) 35, 31, No mode
(c) 34, 36, 38 (d) 35, 36, No mode **(1.5)**

- (ii) Faiz is analysing the data of customers' complaints and his findings set out that 12 customers registered complaints and 'machine halt' is the most common fault among them. This is called _____ of data in statistics.

- (a) Mode (b) Central tendency
(c) Median (d) Mean **(01)**

- (iii) Which of the following is the difference between Ijarah and conventional finance lease?

- (a) In Ijarah, the lessor bears the risk of the asset, while, in conventional lease, the lessee bears the risk of the asset
(b) In Ijarah, the lessor transfers the ownership, while, in conventional lease, the lessor retains the ownership
(c) In Ijarah, any surcharge for delayed payments is credited to income, while, in conventional lease, any such surcharge cannot be credited to income
(d) In Ijarah, rental amount can be variable, while, in conventional lease, rental amount is fixed **(01)**

- (iv) Which **TWO** of the following options are considered when determining the threats from potential entrants?

- (a) Specialist knowledge required
(b) Importance of the product to the firm
(c) Differences between products/services of competitors
(d) Technology protection for existing firms **(1.5)**

- (v) The individual products or business units of the firm can be plotted on the BCG matrix as a circle. The size of the circle shows the relative:

- (a) time taken for the product to reach that stage
(b) money value of sales for the product
(c) brand value of the product
(d) market growth of the product **(01)**

- (vi) A system that takes the generic formula of medicine and recommends all the different brands of medicine available in the pharmacy for that generic formula is an example of:
- (a) Expert System (b) Transaction Processing System
(c) Executive Information System (d) Enterprise Resource Planning System (01)
- (vii) The use of encryption to protect a confidential document involves:
- (a) encrypting the document with public key and decrypting it with private key
(b) encrypting the document with public key and decrypting it with public key
(c) encrypting the document with private key and decrypting it with public key
(d) encrypting the document with private key and decrypting it with the same key (01)
- (viii) Which of the following is the difference between Musharaka and Mudaraba financing?
- (a) In Musharaka, profits are shared equally, while, in Mudaraba, profits are shared on a pre-agreed ratio
(b) In Musharaka, only one party provides management responsibility, while, in Mudaraba, all parties share management responsibility
(c) In Musharaka, both parties provide the capital, while, in Mudaraba, only one party provides the capital
(d) In Musharaka, losses are borne by all parties, while, in Mudaraba, losses are borne by the Mudarib (01)
- (ix) Which **TWO** of the following options are **NOT** 'Coincident economic indicators'?
- (a) Industrial production
(b) Index of business confidence
(c) Number of people in employment
(d) Stock market index (1.5)
- (x) Mean value of share prices of three companies over 5 years and their standard deviation are tabulated as follows:

	Mean value of share price (Rs.)	Standard deviation (Rs.)
Company A	230	20
Company B	230	45
Company C	230	30

- Based on the above data, which of the following **TWO** statements are correct?
- (a) Share price of all the companies carry similar risk as mean value in all cases is the same
(b) Share price of company A is most stable as its standard deviation is the lowest among all companies
(c) Share price of company A is most volatile as its standard deviation is the lowest among all companies
(d) Share price of company C is more stable than company B but more volatile than company A (1.5)
- (xi) While evaluating the financial feasibility of a new project, the finance director concluded that the project has a positive net present value (NPV) at the end of the project when discounted at the cost of capital of 18%. What would be the internal rate of return (IRR) of this project?
- (a) It would also be 18%
(b) It would be lower than 18%
(c) It would be higher than 18%
(d) It would depend on a number of other factors and could be higher or lower (01)

- (xii) Which of the following is the corrupt data that replicates itself within the system, moving from one file or program to another?
- | | | |
|---------------|------------------|------|
| (a) Worms | (b) Trojan Horse | (01) |
| (c) Trap Door | (d) Logic bomb | |

- (xiii) Businesses may try to influence the government policies by mobilizing employees, shareholders, customers, etc. to support their agenda. This method of influencing is called:
- | | | |
|--------------------------|---------------------------|------|
| (a) Advocacy Advertising | (b) Stakeholder Coalition | (01) |
| (c) Trade association | (d) Public Relation | |

Q.2 The management team at 24Seven, a call centre, notices that their call handling times, one of their critical success factors (CSFs), have been consistently underperforming. The management determines that the lack of proper training and inadequate staffing are the main reasons for the declining performance. The data shows that the desired call handling time to achieve the competitive advantage is 30 seconds, but the actual call handling time recorded is 45 seconds.

Given the importance of the issue, the management has hired 3 additional staff and emphasized on setting ambitious training targets to resolve the matter within the next three months. The management is closely following the progress of implementing the plan and has recorded a decrease in call handling time to 35 seconds for the first month. For the second month the target is to reduce call handling time to 30 seconds, which will outbeat the competition, and 28 seconds in the third month to solidify their position as a market leader in call handling times.

Required:

Identify, explain and relate Johnson and Scholes six-step approach to using CSFs from the scenario above. (10)

Q.3 (a) FabTabz (FT) designs, assembles, packages and distributes high-end tablets. FT is known for its unique designs and recognizes it as their core product offering. Due to a recent surge in demand, FT is facing challenges in meeting customer orders in a timely manner without compromising on product quality. FT is considering outsourcing some of its activities to meet the demand.

Required:

Explain outsourcing and provide reasons why FT should opt for outsourcing to meet the demand. Also, explain which activities should FT outsource. (05)

(b) Explain what disruptive technology means. Also, state **two** examples of disruptive technology. (03)

Q.4 Presented below are the three independent situations:

- (i) Abbas, ACA, is the in-charge of approving tender applications on behalf of his company. Recently, he awarded a large tender to Bulk Limited because its CEO had been his mentor during his struggling years.
- (ii) Adnan, an audit senior, is auditing a client where his friend, Aliya, works. In a casual conversation, Adnan told Aliya that she gets paid the lowest salary among all the officers of her grade.
- (iii) Salman, an audit supervisor, intentionally missed many trainings that were deemed necessary to conduct the audit of the firm's clients.

Required:

In the light of ICAP's Code of Ethics, identify and explain the fundamental principles, other than professional behaviour, that may be violated in each of the above cases. (06)

- Q.5 Fawad Ahmed, a consultant, wants to predict the annual revenue (Rs. in million) on the basis of number of marketing campaigns launched in a given year. He has collected the required data and performed regression analysis on it. The table below shows the results obtained.

y-intercept (b_0)	4.78
Sample slope coefficient (b_1)	2.03
Coefficient of determination (R^2)	0.85
Rejection region for 5% significance level	± 2.074
t-statistic	7.37

Required:

- (a) Assess the significance of the relationship between annual revenue and marketing campaigns launched. Also, explain the meaning of R^2 value obtained. (04)
- (b) Suggest how much revenue can Fawad Ahmed expect if he launches four marketing campaigns next year. (02)
- Q.6 Star Business School (SBS), a renowned world-class education provider, is offering a range of degree courses in business, accounting, finance, human resource, hospitality management, marketing, and supply chain management. The school boasts a strong faculty, high-quality research, state-of-the-art infrastructure, and a zero-tolerance policy for quality education.

SBS has been receiving grants from the government to support its futuristic educational activities. However, due to political instability and a deteriorating economic situation in the country, the educational sector has experienced a decline in grants over the past year. Further, it has been under consideration that the grant shall be given to a university only on the recommendation of the Higher Education Commission and its related bill has recently been placed before the National Assembly.

In order to remain competitive, SBS has invested heavily in the latest software and technology for its education program, to ensure smooth delivery of lectures both online and in-person. It is also reserving seats and offering scholarships for international students, and is working on student and faculty exchange programs with world-class universities. SBS's long-term plans include launching various online programs for international students and opening facilitation offices in countries with a high potential for collaborations and international students.

Required:

Conduct PESTEL analysis on the information provided for SBS.

(10)

Section B

- Q.7 Cherat Mobiles (CM) produces and sells smart mobile accessories. It is planning to introduce a low-priced smart watch for the local market. Following information has been gathered in this respect:
- (i) Research and development team incurred an amount of Rs. 0.5 million on market and product research. However, only Rs. 0.2 million was paid as an advance and the remaining amount is due for payment in two months' time.
 - (ii) Initial investment in the new plant for manufacturing the smart watch would be Rs. 250 million including installation and commissioning of the plant. The plant would be partly financed through a loan of Rs. 100 million at an interest rate of 18% per annum. The interest would be payable annually and the principal amount would have to be repaid at the end of 5th year.
 - (iii) The plant would be installed in a building owned by CM which has been currently rented out at Rs. 0.5 million per month.
 - (iv) CM expects to produce 3,000 watches per month. Sales volume is expected to increase by 5% per annum. Contribution margin is estimated to be Rs. 4,000 per watch, whereas the annual fixed cost is estimated to be Rs. 58 million.

- (v) Additional working capital requirements are estimated to be Rs. 15 million which would be realized at 80% of its value at the end of 5th year. No further investment in working capital is expected during the course of the project.
- (vi) The plant would be depreciated at the rate of 15% under the reducing balance method. The plant supplier has offered to repurchase the plant for Rs. 80 million (at current prices) at the end of 5th year. CM would have to incur dismantling costs of Rs. 1.2 million (at current prices) at the end of 5th year.
- (vii) All revenues and costs are quoted on today's rate and are expected to remain the same in the first year. Thereafter, the estimated annual inflation of 9% would be applicable on all future revenues and costs.
- (viii) Applicable tax rate is 30% and tax would be payable / refundable in the year in which it arises. Dismantling costs are allowed as an expense by the tax authorities when they are incurred.
- (ix) CM's cost of capital is 20%.

Required:

By using the net present value method, recommend whether CM should launch the new smart watch. *(Assume that all cash flows arise at the end of each year unless otherwise specified)*

(15)

Q.8 Faran Limited (FL) manufactures and sells a specialised machine. It is currently in the process of finalizing its sales plan for 2023. According to the sales director, the main obstacle to increasing sales is the availability of working capital finance. The finance director informed that any increase in sales would increase:

- the trade receivables by 80% of the additional sales amount;
- the inventories by 60% of the additional sales amount; and
- the trade payables by 35% of the additional sales amount.

Following is the summary of FL's financial position as at 31 December 2022:

Assets	Rs. in million	Equity and liabilities	Rs. in million
Plant and machinery	950	Long term debt	465
		Current liabilities:	
Current assets:		Trade payables	405
Inventory	500	Other payables	110
Trade receivables	300	Equity:	
Cash and bank balances	30	Share capital	350
		Retained earnings	450
	1,780		1,780

The sales for the year ended 31 December 2022 was Rs. 2,200 million, and the net profit after tax was 15% of the sales amount. FL distributes 25% of profit after tax as dividend to its shareholders. It is expected that profit after tax and dividend distribution for the year 2023 will be in line with 2022.

All receipts and payments except dividend can be assumed to occur evenly throughout the year. Dividend is paid on the last day of the financial year.

Required:

- (a) Determine the amount of additional working capital finance required to achieve a 25% increase in sales next year. (03)
- (b) Estimate the maximum growth in sales that FL can achieve under each of the following independent assumptions:
 - (i) No external financing is available. (02)
 - (ii) Only debt financing is available to the extent that existing debt equity ratio is maintained at the end of 2023. (04)

- Q.9 (a) Apart from market risk, identify other broader categories of financial risks that a business is subjected to. Also identify **two** strategies to manage each of the identified financial risks. (03)
- (b) Fifa Sports Limited (FSL) imports raw material from China. FSL has to pay CNY 1,000,000 in six months' time. FSL plans to hedge this exposure to currency risk using a money market hedge. Following information is available in this regard:

Interest rates	Deposit	Borrowings
	--- Rate per annum ---	
In CNY (3 months)	11.35%	15.12%
In CNY (6 months)	11.71%	15.81%
In PKR (3 months)	12.12%	17.01%
In PKR (6 months)	12.90%	17.16%

PKR/CNY	
Current spot exchange rate	PKR 34.5
Estimated exchange rate in 3 months	PKR 36.8
Estimated exchange rate in 6 months	PKR 37.6

Required:

Construct money market hedge and determine the effective exchange rate. Recommend whether the hedge would be beneficial for FSL. (06)

- Q.10 International Packaging Limited (IPL) is in business of packaging material for a range of food products. Following information has been extracted from IPL's financial statements as on 31 December 2022:

	Rs. in '000
Ordinary share capital (Rs. 10 each)	100,400
Irredeemable preference share capital (Rs. 100 each)	20,400
9% redeemable bonds (Rs. 100 each)	30,200

Additional information:

Existing businesses:

- (i) IPL distributes 60% of its earnings as cash dividend. Following is the trend of its earning per share (EPS) for the preceding six years:

For the year ended 31 December	2017	2018	2019	2020	2021	2022
EPS (Rs.)	16	19	21	24	26	28

- (ii) The return on government securities is 9% per annum whereas market risk premium is 5% per annum. IPL's current equity beta is 1.2.
- (iii) IPL pays Rs. 20 as annual dividend on each preference share every year. The current market price of preference shares is Rs. 185 each.
- (iv) 9% redeemable bonds will be redeemed on 31 December 2025 at 15% premium. The current market price of these bonds is Rs. 110 each.
- (v) Applicable tax rate is 30%.

New business:

- (i) IPL is planning to setup one more packaging unit. Total cost of the project is estimated to be Rs. 45 million which will be financed by issuing 15% redeemable preference shares of Rs. 100 each at par value. These shares will be redeemed after 4 years at a premium of 20% above par value.
- (ii) IPL estimates that, as a result of this new investment, the equity beta will increase to 1.3.

Required:

- (a) Compute IPL's weighted average cost of capital (WACC) of the existing business. (07)
- (b) Calculate the impact of new business on IPL's existing WACC. Also discuss the effect of the revised WACC on the overall market value of the company. (05)

(THE END)