The Institute of
Chartered Accountants
of Pakistan

Multi Subject Assessment Stage

7 June 2022
3 hours and 45 minutes – 100 marks

Management Professional Competence

CRN:

Name: ______________________________

INSTRUCTIONS

Read the instructions carefully:

1. Answer all **THREE** questions.

2. Write your Name and CRN on the front page of the **MAIN ANSWER SCRIPT** and CRN on the front page of the **SUPPLEMENTARY SCRIPT.** Do not write your Name, CRN or any other identification mark on any other portion of the main or supplementary answer script.

3. Answer to each question must begin on a new page and must be clearly numbered. Use both sides of the paper in your main and supplementary answer scripts.

4. Answer in **black** pen only.

5. You are allowed to write notes/comments on the question paper. However, you must write your CRN and name on the question paper at the space provided above before starting to write any notes/comments.

6. The questions in this paper have been prepared on the assumption that examinees do not have a detailed knowledge of the types of organisations to which they relate. No additional mark will be given to examinees displaying such knowledge.

7. Only **FIVE** original books duly bound are allowed.

QUESTION 1

Shrimp Farm Supplies Limited (SFS) manufactures aquaculture equipment for use in shrimp farming, such as plastic tanks and aerators. It is owned and managed by the Khan family and was set up 15 years ago. SFS rents manufacturing premises on the outskirts of Bahawalpur in the Punjab, and has developed a close relationship with a few trusted customers. It has grown steadily, but is now restricted by market size, so is looking to diversify. The background to the founding member, Kamran Khan, is one of engineering and manufacturing. He worked on a shrimp farm as a young man and saw an opportunity for the supply of high quality equipment. There are four directors on the board who are all family members, and keen to work in the family business for the foreseeable future. SFS has a reputation for high quality products and responsive customer service.

The board of directors of SFS is looking to expand. The business has amassed considerable knowledge about shrimp farming over the years so it can provide superior products and support to its customers. It seems logical to acquire a shrimp farm to exploit this knowledge.

Following the September 2021 board meeting, the finance director, Hamza Khan, has identified a target company, located relatively nearby, called Mangwani Shrimp. Hamza has visited the site, spoken to the current owners and compiled a research report for the board to consider (Appendix 1). This was presented at the board meeting held on 4 January 2022 where the expansion was discussed in some detail (Appendix 2). As an alternative to an outright acquisition, the board would also consider entering into a joint venture if that would be preferable.

During the ensuing due diligence process relating to the acquisition, an internal memo at Mangwani Shrimp was found that made reference to an outbreak of Acute Hepatopancreatic Necrosis Disease (AHPND) on the farm, also known as Early Mortality Syndrome, in June 2021. The memo noted that the current owners treated the shrimp stocks successfully with antibiotics, given the otherwise high risk of 100% shrimp mortality.

However, the use of antibiotics as a treatment is controversial – it may encourage drug resistant strains of the disease, and the antibiotics also remain present in treated shrimp to be consumed by humans. The current farm owners are not planning to disclose the outbreak – they see it as a private matter and are concerned it might attract the attention of the Punjab Department of Fisheries. Hamza has conducted further research and produced a working paper detailing the issue (Appendix 3).

The tax return of Mangwani Shrimp for the year ended 31 December 2020 was prepared and filed by one of the family members. He collected the accounting records and filed the return through the FBR portal.

Requirements

(a) Recommend and justify a range of suitable values and a bidding strategy assuming outright acquisition of Mangwani Shrimp. **(11 marks)**

(b) Evaluate the strategic proposal to acquire Mangwani Shrimp. **(10 marks)**

(c) Compare entering into a joint venture with outright acquisition of Mangwani Shrimp, and state (with justification) which you recommend. No calculations are required. **(08 marks)**

(d) Identify the key post-acquisition issues that would arise if the acquisition went ahead and recommend steps to manage these risks. **(06 marks)**

(e) Evaluate the ethical issues surrounding the outbreak of AHPND on the shrimp farm, and recommend what SFS and the management of Mangwani Shrimp should do. **(05 marks)**

(f) Suggest a tax plan which allows Mangwani Shrimp to achieve maximum tax savings. Assume that:

- the revenue of Mangwani Shrimp would grow by 5% per annum for a foreseeable future.
- the income to be earned will not fall under the definition of agriculture income.

Ignore group taxation.

(10 marks)

Total: 50 marks

APPENDIX 1 – RESEARCH REPORT - MANGWANI SHRIMP

CONFIDENTIAL

Mangwani Shrimp

Introduction
This report summarises preliminary findings in relation to Mangwani Shrimp as a possible acquisition target for discussion at board level.

Background
Mangwani Shrimp is a seven hectare shrimp farm located near Bahawalpur in the Punjab that produces Monsoon River Shrimp: 10 tonnes per hectare per crop, for two crops a year.

The current owners of Mangwani Shrimp – Hardeep and Akal Kohli – set the business up 10 years ago, and are now looking to realise some or all of their investment in the farm. The Kohli brothers are well-known and supply top local restaurants, as well as exporting shrimp under specialized packaging. They deal with their customers personally in all cases.

They employ four staff to help manage the ponds, and have historically purchased most of their equipment from us. The staff are family members of friends or the Kohli brothers. The brothers have known each of their staff members from birth; the staff are very loyal.

Systems are rudimentary – they have some industry standard pond/shrimp monitoring equipment, and currently operate spreadsheets that the Kohli brothers wrote themselves to keep the books of account and prepare basic management accounts. Annual accounts and tax returns are produced with the help of a family member, who is a qualified accountant.

Recent financial statements:

Income statement for the year ended 31 December 2021

	31 Dec 2021	**31 Dec 2020**
	--------- Rs. in '000 ---------	
Revenues	226,100	214,795
Cost of sales	(193,490)	(186,002)
Gross profit	32,610	28,793
Admin costs	(15,342)	(15,099)
Profit before interest and tax	17,268	13,694
Interest	(3,000)	(3,000)
Profit before tax	14,268	10,694
Taxation	(2,996)	(2,246)
Profit after tax	**11,272**	**8,448**
Dividends	8,500	8,300

Statement of financial position

	31 Dec 2021	31 Dec 2020
	--------- Rs. in '000 ---------	
Non-current assets	38,571	37,079
Inventory	10,504	8,472
Receivables	18,841	17,432
Cash	3,454	4,523
Payables	(15,434)	(14,342)
Net working capital	17,365	16,085
	55,936	**53,164**
Share capital	2,000	2,000
Retained earnings	23,936	21,164
	25,936	23,164
10% bank loan 2025	30,000	30,000
	55,936	**53,164**

A suitable cost of capital to value the equity of the Mangwani Shrimp would be 10%.

The industry average P/E ratio is 12, and the industry standard return on capital employed (profit before interest and tax/(equity + LT debt)) is 20%.

The performance of the business is very dependent on the price of shrimp, which is a global commodity. Increases in prices and yields are forecasted to generate growth in profits after tax of 2% per year indefinitely.

Any questions, please ask.

Best wishes

Hamza Khan

APPENDIX 2 – EXTRACT FROM SFS BOARD MEETING MINUTES – 4 JANUARY 2022

Present:

Kamran Khan – Chief Executive Officer (KK)

Hamza Khan – Finance Director (HK)

Tariq Khan – Operations and IT Director (TK)

Amira Khan – Human Resources Director (AK)

Downstream expansion opportunity

HK presented the research report on Mangwani Shrimp for board discussion.

HK informed that the acquisition would require additional finance. KK confirmed family funds would not be available, so alternative funding would need to be found, and maybe a joint venture with the Kohli brothers would be better all round. HK noted that he had little experience of raising funds outside the family other than the bank finance currently in place, but he would research alternatives, given the covenants in place with the current loan. He added that perhaps the external advisors that he would need to help with this, his first acquisition, could add finance to their report.

AK was concerned about the heavy reliance the value of the business may have on the ongoing involvement of the Kohli brothers, and asked if it would be possible to gain assurances from them as to their ongoing involvement. HK felt uncomfortable about seeking such assurances, saying they couldn't be 'bound like slaves' to the future of the business. KK replied that if they were to ever expand the shrimp business in the future, they would need the Kohli brothers' involvement and industry contacts.

TK noted the increasing regulation in the sector, and the need to monitor and manage the KPIs required by the Punjab Department of Fisheries. That said, TK added that the business had a sound reputation following enquiries he had made, and by all accounts, the regulators held the business in high regard.

HK concluded by noting that valuations would follow in due course.

APPENDIX 3 – WORKING PAPER - OUTBREAK OF AHPND

File note: Discussion with Hardeep Kohli on 7 January 2022

Context
During due diligence work relating to the potential expansion of operations into shrimp farming, reference was found in the internal memo to an outbreak of 'Acute Hepatopancreatic Necrosis Disease (AHPND)' on the farm, also known as Early Mortality Syndrome. The disease kills shrimp and is highly contagious, with untreated cases often seeing 100% mortality of shrimp stocks. The disease is not harmful to humans.

Discussion
Hardeep was keen to play down the outbreak, and emphasised that the disease was not harmful to humans. He added that antibiotics had been used to treat the disease swiftly, and had been successful, minimising damage to stocks. All shrimp has been sold as usual. As such, the outbreak and its treatment have gone completely unreported publicly.

I asked if he had reported the outbreak to the Punjab Department of Fisheries. He said there was no need, given that the incident was contained.

Further research
Further research after the meeting showed that there is some concern in the scientific community about the use of antibiotics to treat shrimp in this way for two reasons:

- It may encourage drug resistant strains of the disease; and
- Traces of the antibiotics remain in the shrimp after treatment has concluded, to later be consumed by humans. To date, no studies have been conducted as to the impact this may have on human health, if anything at all.

The impact of both the incidence of disease, its treatment, and the lack of disclosure will need to be considered further.

Filed: 8 January, 2022. *Hamza Khan.*

QUESTION 2

Daharki Chemicals Limited (DC) is a 100% family-owned business that supplies ammonia principally to the fertiliser industry. It produces ammonia in a factory located on the outskirts of Daharki in an energy intensive process that is standard in the industry. It seeks to offset its energy consumption by using renewable energy where possible, and has an active carbon offset policy to preserve and enhance the Changa Manga forest. It has a good reputation for consistently high quality supplies and reliable deliveries – many of its suppliers are large businesses that have dealt with DC for years and have good personal relationships with the Kundi family. DC is planning to expand into the production of carbon dioxide, the other major ingredient in urea-based fertiliser.

The Finance Director, Bacha Kundi, is preparing a proposal for financing the investment. He has asked for your help to estimate both how much finance will be required, and what form it should take. The options he is considering are either a bank loan, or issue of new equity via flotation on the Pakistan Stock Exchange.

Bacha has prepared some background information on the investment (Appendix 1), to assist with your calculations.

He has also provided extracts from the latest set of financial statements to help with the funding decision (Appendix 2).

The possibility of floating on the Pakistan Stock Exchange is not opposed, in principle, by the family. However, Bacha is concerned that various changes to the company, including governance, will need to be addressed before a flotation can be effected. The current arrangements are discussed in Appendix 3.

Requirements

(a) Calculate the amount of capital that needs to be raised, assuming working capital is financed entirely with long-term funds. **(10 marks)**

(b) Evaluate whether debt or equity should be used to finance the expansion. **(10 marks)**

(c) Recommend key improvements that are needed to ensure DC's corporate governance is in line with the requirements of Listed Companies (Code of Corporate Governance) Regulations, 2019. **(05 marks)**

Total: 25 marks

APPENDIX 1 – BRIEFING PAPER – INVESTMENT IN PRODUCTION OF CARBON DIOXIDE

Current funding arrangements are needed entirely for current operations. The new investment would require separate funding i.e. I don't want to rely on existing funds within DC – they are already accounted for in our forecasts. You should base your calculations on the 2021 financial statements, assuming 365 days in a year.

I anticipate the following impact on the DC financial statements:

- Increase in revenues: 30%
- Increase in margin: increase of 2.3 percentage points
- Increase in receivables days: 10 days
- Decrease in payables days: 5 days
- Decrease in inventory turnover to 10 times per year
- PPE: will be increased by 100%

The industry average gearing level (LT debt / (LT debt + equity) is 20% by market values. An adjusted P/E ratio to value equity in DC is 10.

APPENDIX 2 – FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2021

Statement of profit or loss

	Rs. in million
Revenue	11,600
Cost of sales	(8,504)
Gross margin	3,096
Marketing	(54)
Distribution	(300)
Admin	(25)
Profit before interest and tax	2,717
Interest	(350)
Profit before tax	2,367
Tax (29%)	(686)
Profit after tax	**1,681**

Statement of financial position

	Rs. in million
Property, plant & equipment	9,574
Inventory	543
Receivables	970
Cash	3,454
Payables	(435)
Net working capital	4,532
	14,106
Share capital	100
Retained earnings	9,006
	9,106
7% bank loan 2025	5,000
	14,106

Note: Share capital is issued with a nominal value of Rs. 100 per share.

APPENDIX 3 – CURRENT GOVERNANCE STRUCTURE OF DAHARKI CHEMICALS

The board consists of the following:

Chair and Chief Executive Officer	Nawaz Kundi – originally set up the business 20 years ago. Nawaz also owns 35% of the company shares.
Finance Director	Bacha Kundi – Bacha is a recently qualified accountant and is the eldest son of the CEO. Bacha owns 10% of the company shares.
Human Resources Director	Parisa Kundi – Parisa is CEO's daughter and has been in the current position for 12 years. She owns 5% of the company shares.
Operations and IT Director	Danish Kundi – Responsible for the day-to-day running of the plant and information technology. His background is in chemistry. He owns 25% of the company shares.
Non-executive Director	Hamid Kundi – Hamid is the CEO's brother, and owns 15% of the company shares.

The remaining shares are owned by other members of the family.

All directors are paid a fixed salary.

There is an audit committee, made up of Nawaz, Bacha and Hamid. This committee reviews the accounts prior to board approval, and ensures internal controls are sound.

QUESTION 3

Salman Sugarcane Processing Limited (SSP) is a family-owned business that produces sugar: it purchases and crushes sugar cane, heats and filters the resulting juice, and crystallises it into pure sugar – the main product of the company. Production is all done on one large site near the family home in the Kirthar mountains. SSP's production is distributed by a third party logistics company. It sells its sugar to large international businesses mainly for use in the production of confectionary. It also has a small range of exclusive 'from the field to your hand' supplies to catering businesses and restaurants globally.

Sales have been falling recently as demand for pure sugar has been falling in SSP's key traditional markets in Europe. This has not only impacted volumes but prices have become less stable as a result. The marketing manager is looking to address this with research into new markets – big data will be used to do this. The development of a new marketing mix will be needed to target business customers in those markets. Early signs are that sub-Saharan Africa may be a good target market for export – preliminary research is shown in Appendix 2.

The business has never managed risk formally before as the board considered it to be an unneccesary expense, and potentially interferes with the smooth operation of the business. However, the increasingly volatile world price of their main product has worried the family owners, and they are considering their options.

The family rewards executive management with a significant bonus, payable in cash, based on the achievement of annual profit targets. The family owners are surprised the targets have been met in the current climate, and want your help to understand how this might be possible. They have provided some analysis to assist in Appendix 1.

Requirements

(a) Evaluate how big data could be used to form the marketing strategy of SSP. **(06 marks)**

(b) Advise how the marketing mix may need to adapt for the new target market. **(04 marks)**

(c) Assess the extent to which the current bonus scheme may have contributed to short-termism in the business. **(06 marks)**

(d) Assess the alternatives for hedging against short-term sugar price fluctuations, and recommend with justification an appropriate hedging strategy. **(09 marks)**

Total: 25 marks

APPENDIX 1 – MANAGEMENT ACCOUNTS EXTRACTS FOR THE YEAR ENDED 31 DECEMBER 2021

	2021	2020
	------- Rs. in million -------	
Revenue	1,100	1,191
Cost of sales	(770)	(820)
	330	371
Expenses*	(120)	(221)
Profit before taxation	210	150
Taxation (29%)	(60.9)	(43.5)
Profit after tax	**149.1**	**106.5**

***expenses analysis**

	2021	2020
	------- Rs. in million -------	
Salaries	65	75
Training	3	15
Research and development	17	33
Admin and other	45	48
Bad debts	(25)	40
Executive bonus	15	10
	120	**221**

APPENDIX 2 – MARKET REPORT – AFRICAN SUGAR CONSUMPTION

Many locations in the world are experiencing a reduction in the consumption of sugar per capita, due in part to health concerns and rising relating illnesses such as diabetes. However, sub-Saharan Africa is an exception to this.

Research shows that sugar consumption continues to grow:

	2019-2020	2022-2023
	Millions of tonnes	
Home grown	5.1	5.2
Imported	8.9	9.7
Total consumption	**14.0**	**14.9**

A recent levy introduced in South Africa has halted consumption growth in that country, but growth continues elsewhere in sub-Saharan Africa.

(THE END)