MACHAKOS UNIVERSITY

University Examinations for 2020/2021 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF BUSINESS ADMINISTRATION

SECOND YEAR FIRST SEMESTER EXAMINATION FOR

MASTER OF BUSINESS ADMINISTRATION

BAC 822: ENTREPRENEURIAL FINANCE

DATE: 2/3/2021 **TIME: 2.00-5.00 PM**

INSTRUCTIONS:

1. Answer QUESTION ONE and any other THREE questions
2. All workings where necessary must be shown
3. Be clear, neat and orderly in your presentation

QUESTION ONE

a) The following ventures are at different stages in their life cycles. Identify the likely stage for each venture and describe the type of financing each venture is likely to be seeking and identify potential sources for that financing.

i. Phil Young, founder of Pedal Pushers, has an idea for a pedal replacement for children's bicycles. The Pedal Pusher will replace existing bicycle pedals with an easy-release stirrup to help smaller children hold their feet on the pedals. The Pedal Pusher will also glow in the dark and will provide a musical sound as the bicycle is pedaled. Phil is seeking some financial help in developing working prototypes. (6 marks)

ii. Petal Providers is a firm that is trying to model the U.S. floral industry after its European counterparts. European flower markets tend to have larger selections at lower prices. Revenues started at $1 million last year when the first "mega" Petal Providers floral outlet was opened. Revenues are expected to be $3 million this year and $15 million next year after two additional stores are opened. (6 marks)

b) Phil Young, founder of the Pedal Pushers Company, has developed several prototypes of a pedal replacement for children's bicycles. The Pedal Pusher will replace existing bicycle pedals with an easy release stirrup to help smaller children hold their feet on the pedals. The Pedal Pusher will glow in the dark and will provide a musical sound as the bicycle is pedaled. Phil plans to purchase materials for making the product from others, assemble the products at the venture's facilities, and hire product sales representatives to sell the Pedal Pushers through local retail and discount stores that sell children's bicycles. Phil will need to purchase plastic pedals and extensions, bolts, washers and nuts, reflective material, and a microchip to provide the music when the bicycle is pedaled.

i. How should Phil organize his new venture? In developing your answer, consider such factors as amount of equity capital needed, business liability, and taxation of the venture. (8 marks)

ii. Phil is concerned about trying to protect the intellectual property embedded in his Pedal Pusher product idea and prototype. How might Phil consider protecting his intellectual property? (7 marks)

QUESTION TWO (15 MARKS)

MINI CASE Interact Systems, Inc.

Interact Systems, Inc., has developed software tools that help hotel chains solve application integration problems. Interest's application integration server (AIS) provides a two-way interface between a central reservation system (CRS) and a property management system (PMS). At least two important trends in the hotel industry are relevant. First, hotels are shifting away from the manual booking of room reservations, and electronic bookings will continue to increase as more bookings are made over the Internet. Second, competitive pressures are forcing hotels to implement yield management programs and to increase customer service. By integrating the CRS and PMS through Interact's AIS, inventories can be better managed, yields improved, and customer service enhanced. All reservation traffic is routed from the CRS to individual hotel properties. This allows Interact Systems to create a database that can be used to track customers and to facilitate marketing programs, such as frequent-stay or VIP programs, as a way of increasing customer satisfaction. Interact forecasts application integration expenditures in the hospitality industry to exceed $1 billion by 2012. Greg Thomas founded Interact Systems in 2006 and developed the firm's middleware software and hospitality applications. He has twelve years of systems applications experience and currently is Interact's chief technology officer. Eric Westskow joined Interact in early 2009 as president and CEO. He previously had worked in sales and marketing in the software industry for more than twenty years.

a) What other organizational structures would have been appropriate and why? (5 marks)

b) What is the intellectual property involved in Interact Systems' business model? (5 marks)

c) What methods of protection are available for Interact Systems' intellectual property? (5 marks)

QUESTION THREE (15 MARKS)

a) Identify and describe the two components of the ROA model both in terms of what financial dimensions they measure and how they are calculated. (3 marks)

b) The Salza Technology Corporation successfully increased its "top line" sales from $375,000 in 2009 to $450,000 in 2010. Net income also increased as did the venture's total assets. You have been asked to compare the financial performance between the two years. Calculate the relevant ratios to compare the performance of the two years. (12 marks)

SALZA TECHNOLOGY CORPORATION ANNUAL INCOME STATEMEN
(IN $ THOUSANDS)

	2009	2010
Net sales	$375	$450
Less: Cost of goods sold	–225	–270
Gross profit	150	180
Less: Operating expenses	–46	–46
Less: Depreciation	–25	–30
Less: Interest	–4	–4
Income before taxes	75	100
Less: Income taxes	–20	–30
Net income	$ 55	$ 70
Cash dividends	$ 17	$ 20

BALANCE SHEETS AS OF DECEMBER 31 (IN $ THOUSANDS)

	2009	2010
Cash	$ 39	$ 16
Accounts receivable	50	80
Inventories	151	204
Total current assets	240	300
Gross fixed assets	200	290
Less accumulated depreciation	–95	–125
Net fixed assets	105	165
Total assets	$345	$465
Accounts payable	$ 30	$ 45
Bank loan	20	27
Accrued liabilities	10	23
Total current liabilities	60	95
Long-term debt	15	15
Common stock	85	120
Retained earnings	185	235
Total liabilities and equity	$345	$465

QUESTION FOUR (15 MARKS)

Kaj Rasmussen founded Scandi Home Furnishings as a corporation during mid-2007. Sales during the first full year (2008) of operation reached $1.3 million. Sales increased by 15 percent in 2009 and another 20 percent in 2010. However, after increasing in 2009 over 2008, profits fell sharply in 2010, causing Kaj to wonder what was happening to his "pride-and-joy" business venture. After all, Kaj worked as closely as possible to a 24/7 pace, beginning with the startup of Scandi and continuing through the first three full years of operation. Scandi Home Furnishings, located in eastern North Carolina, designs, manufactures, and sells Scandinavian-designed furniture and accessories to home furnishings retailers. The modern Scandinavian design has a streamlined and uncluttered look. While this furniture style is primarily associated with Denmark, both Norwegian and Swedish designers have contributed to the allure of Scandinavian home furnishings. Some say that the inspiration for the Scandinavian design can be traced to the elegant curves of art nouveau from which designers were able to produce aesthetically pleasing, structurally strong modern furniture. Danish furnishings and the home furnishings produced by the other Scandinavian countries—Sweden, Norway, and Finland—are made using wood (primarily oak, maple, and ash), aluminum, steel, and high-grade plastics. Kaj grew up in Copenhagen, Denmark, and received an undergraduate degree from a technical university in Sweden. As is typical in Europe, Kaj began his business career as an apprentice at a major home furnishings manufacturer in Copenhagen. After learning the trade, he quickly moved into a management position in the firm. However, after a few years, Kaj realized that what he really wanted to do was to start and operate his own Scandinavian home furnishings business. At the same time, after travelling throughout the world, he was sure that he wanted to be an entrepreneur in the United States. Kaj moved to the United States in early 2007. With $140,000 of his personal assets and $210,000 from venture investors, he began operations in mid-2007. Kaj, with a 40 percent ownership interest and industry-related management expertise, was allowed to operate the venture in a way that he thought was best for Scandi. Four years later, Kaj is sure he did the right thing. Following are the three years of income statements and balance sheets for Scandi Home Furnishings. Kaj felt that that he would need to continue to expand sales to maintain a competitive advantage. After first concentrating on selling Scandinavian home furnishings in the Northeast in 2008 and 2009, he decided to enter the West Coast market. An increase in expenses occurred associated with identifying, contacting, and selling to home furnishings retailers in California, Oregon, and Washington. Kaj Rasmussen hopes that you can help him better understand what has been happening to Scandi Home Furnishings from both operating and financial standpoints.

SCANDI HOME FURNISHINGS, INC.

INCOME STATEMENTS	2008	2009	2010
Net sales	$1,300,000	$1,500,000	$1,800,000
Cost of goods sold	780,000	900,000	1,260,000
Gross profit	520,000	600,000	540,000
Marketing	130,000	150,000	200,000
General and administrative	150,000	150,000	200,000
Depreciation	40,000	53,000	60,000
EBIT	200,000	247,000	80,000
Interest	45,000	57,000	70,000
Earnings before taxes	155,000	190,000	10,000
Income taxes (40%)	62,000	76,000	4,000
Net income	$ 93,000	$ 114,000	$ 6,000
Cash Dividends	$ 0	$ 74,000	$0

SCANDI HOME FURNISHINGS, INC.

BALANCE SHEETS	2008	2009	2010
Cash	$ 50,000	$ 40,000	$ 10,000
Accounts receivable	200,000	260,000	360,000
Inventories	450,000	500,000	600,000
Total current assets	700,000	800,000	970,000
Fixed assets, net	300,000	400,000	500,000
Total assets	$1,000,000	$1,200,000	$1,470,000
Accounts payable	$ 130,000	$ 170,000	$ 180,000
Accruals	50,000	70,000	80,000
Bank loan	90,000	90,000	184,000
Total current liabilities	270,000	330,000	444,000
Long-term debt	300,000	400,000	550,000
Common stock*	350,000	350,000	350,000
Retained earnings	80,000	120,000	126,000
Total liabilities and equity	$1,000,000	$1,200,000	$1,470,000

a) Prepare an analysis of the average conversion periods for the three components of the cash conversion cycle for 2008–2009 and 2009–2010. Explain what has happened in terms of each component of the cycle. (8 marks)

b) Compare the cash build, cash burn, and the net cash build/burn positions for 2009 and 2010. What, if any, changes have occurred? (7 marks)

QUESTION FIVE (15 MARKS)

a) Why is it usually easier to forecast sales for seasoned firms in contrast with early-stage ventures? (3 marks)

b) Explain how projected economic scenarios can be used to help forecast a firm's sales growth rate. (3 marks)

c) Identify and describe the four-step process typically used to forecast sales for seasoned firms. (3 marks)

d) What are the three steps typically used to forecast sales for early-stage ventures? (3 marks)

e) Describe the general relationship between the life cycle stage and the ability to accurately forecast sales for a firm. (3 marks)