NATIONAL UNIVERSITY OF SINGAPORE

EC2204: Financial Accounting for Economists

Semester 2, AY2018-2019

Time allowed: 2 Hours

INSTRUCTIONS TO CANDIDATES

1. Write your student number only. Do not write your name.
2. This assessment paper contains FIVE (5) questions and comprises FIVE (5) printed pages, including this page.
3. Answer ALL questions.
4. Start each question on a new page.
5. This is a CLOSED book examination.
6. You may use a scientific (non-graphing) calculator.
7. The total mark for this paper is 50.

Question 1:

The Financial Statements of Ryder Corporation are as follows:

Ryder Corporation
Comparative Balance Sheet
31 December

	2018	2017
Assets		
Cash	$44,000	$28,000
Accounts receivable	A	32,000
Inventories	B	70,000
Prepaid rent	2,500	2,000
Property, plant, and equipment	224,000	200,000
Accumulated depreciation	(55,000)	(40,000)
Total assets	$341,500	$292,000
Liabilities and Stockholders' Equity		
Accounts payable	$38,000	$34,000
Accrued liabilities	10,000	12,000
Notes payable (long-term)	130,000	150,000
Contributed capital	50,000	25,000
Retained earnings	113,500	71,000
Total liabilities and stockholders' equity	$341,500	$292,000

Ryder Corporation
Income Statement
Year Ended 31 December 2018

Sales		$477,500
Expenses		
Cost of goods sold	$290,000	
Selling, general, and administrative expenses	94,000	
Depreciation expense	C	
Interest expense	9,000	
Income taxes	D	425,000
Net income		$ 52,500

Ryder Corporation
Cash Flow Statement
Year Ended 31 December 2018

Cash Flows from Operating Activities	
Net income	$52,500
Adjustments to reconcile net income to net cash provided by operating activities:	
Depreciation	15,000
Changes in current assets and current liabilities:	
Accounts Receivable	(4,000)
Inventories	(20,000)
Prepaid Expenses	E
Accounts Payable	4,000
Accrued Liabilities	F
Net cash provided by (used in) operating activities	G
Cash flows from investing activities	
Purchase of property, plant, and equipment	(24,000)
Net cash provided by (used in) investing activities	(24,000)
Financing activities	
Additional capital contributed by stockholders	H
Payments on long-term debt	(20,000)
Payment of cash dividends	I
Net cash provided by (used in) financing activities	J
Increase in cash and cash equivalents	16,000
Cash and cash equivalents, beginning of period	28,000
Cash and cash equivalents, end of period	$44,000

A cash dividend was declared and paid in full to stockholders during the year.

(10 marks) Solve for the missing numbers. Label your answers (from A to J) clearly.

Answer:

A	$36,000	C	$15,000	E	$ (500)	G	$45,000	I	$(10,000)
B	$90,000	D	$17,000	F	$(2,000)	H	$25,000	J	$ (5,000)

Question 2:

(a) Everest Corporation has the following financial information:

Current assets	$ 430,000
Long-lived assets	1,070,000
Current liabilities	120,000
Long-term liabilities	630,000
Contributed capital	100,000
Retained earnings	650,000

A long-term debt covenant specifies that Everest Corporation's debt/equity ratio cannot be greater than 1.0 and current ratio cannot be less than 2.0.

Everest Corporation is currently 100% owned by Mr. Everest. It plans to invest $500,000 in a new machine that will keep the company in an excellent competitive position in a very competitive industry.

In order to finance this investment, Everest Corporation plans to use its cash, issue long-term debt, and issue common shares (to others) – Proposal 1.

Mr. Everest will support Proposal 1 only if he is able to retain at least 50% ownership in the corporation (after the issuance of new shares).

(i) (3 marks) Explain why Mr. Everest will not support Proposal 1.

(ii) (3 marks) Propose an alternative way for Everest Corporation to finance the machine such that it can adhere to the debt covenants and allow Mr. Everest to retain at least 50% ownership.

(b) Chase Corporation had the following balances in its shareholders' equity accounts on the date 31 December 2017:

Share Capital – Ordinary, $10 par, 50,000 shares authorized,	
20,000 shares issued………………….	$200,000
Share Premium – Ordinary…………………….	250,000
Retained Earnings……………………………..……	500,000
Treasury Shares, 1,000 shares………………....	(20,000)
Total shareholders' equity…………………..….	$930,000

The following transactions occurred during 2018:

3 February	Issued 3,000 ordinary shares for $22 per share
10 May	Declared a $0.50 per share dividend on ordinary shares.
12 October	Sold 500 treasury shares for $20 per share.
31 December	Net profit for the year was determined be $75,000.

(4 marks) Based on the above information, prepare a statement of changes in equity for 2018.

Answer:

(a) (i)

The $500,000 investment cannot be raised within the parameters set by the debt covenants and fulfill Mr. Everest's desire to retain control of his corporation. The current ratio restriction limits Everest Corporation's ability to finance the investment from retained earnings (internally generated financing) to $190,000.

Using this cash leaves the current ratio at a dangerous, but acceptable, level of 2.0 and $310,000 to be raised by debt or/and equity issues. If Everest Corporation issues the maximum of $100,000 of common stock, then total shareholders' equity would be $850,000 and $210,000 would have to be raised from debt issue.

However, the debt/equity restriction limits total debt to $850,000. Existing debt is $750,000. Therefore, only $100,000 financing from debt is available. This leaves Everest Corporation $110,000 short of the financing required.

(a) (ii)

(Any reasonable solutions are accepted.)

An algebraic "trick" would help Mr Everest use the money from retained earnings and still meet the current ratio minimum. Everest Corporation now has current assets of $430,000 and current liabilities of $120,000. This releases $190,000 to use for the investment and still maintain a 2.0 current ratio.

If $110,000 of current liabilities are paid, then Everest Corporation would have $320,000 of current assets and $10,000 of current liabilities. This releases $300,000 for use in investment (assuming the current assets are very liquid).

Also, by reducing current liabilities by $110,000, $110,000 more long-term debt can be issued and still have the debt/equity ratio be less than or equal to one. However, this is "operating on the edge" and any downturn in sales and cash provided by operations would result in financial disaster.

(b)

Chase Corporation Statement of Changes in Equity 31 December 2018					
	Share Capital – Ordinary	Share Premium – Ordinary	Retained Earnings	Treasury Shares	Total Equity
Balance, 31 December, 2017	$200,000	$250,000	$500,000	$(20,000)	$930,000
Net Profit			75,000		75,000
Issuance of ordinary shares	30,000	36,000			66,000
Reissuance of treasury shares				10,000	10,000
Cash dividend*			(11,000)		(11,000)
Balance, 31 December 2018	$230,000	$286,000	$564,000	$(10,000)	$1,070,000

*(20,000 - 1,000 + 3,000) shares x $0.50/share = $11,000

Question 3:

(a) (4 marks) Discuss the limitations of using historical cost to value assets in an inflationary environment.

(b) Rocky Corporation began operations on 1 January 2018. Its Financial Statements are as follows:

Income Statement		
Sales revenue	$20,000	
Cost of goods sold	9,000	
Gross profit	$ 11,000	
Depreciation (Note 1)	3,000	
Net income	$ 8,000	
Balance Sheet		
Current assets		$44,000
Equipment	$20,000	
Accumulated depreciation	(3,000)	17,000
Total assets		$61,000
Liabilities (all current)		$45,000
Shareholders' equity		16,000
Total liabilities & shareholders' equity		$61,000

Note 1: Equipment was purchased on January 1. Straight-line depreciation method was used with an estimated economic life of 5 years.

(i) (1 mark) Determine the estimated salvage value of the equipment being depreciated using the straight-line method.

(ii) (2 marks) Suppose Rocky Corporation used double-declining-balance depreciation method instead. Present the new Income Statement and Balance Sheet.

(iii) (3 marks) Evaluate Rocky Corporation's current ratio, debt/equity ratio, and debt to assets ratio using the straight-line and double-declining-balance methods of depreciation.

Answer:

(a)

- Under historical cost
  - assets are recorded at the amount of cash or cash equivalents paid, to acquire them at the time of their acquisition
  - liabilities are recorded at the amount of proceeds received in exchange for the obligation,
  - assumes money holds a constant purchasing power

- Problem of relevance in times of rising prices
  - *asset's current value may be different from historical cost*
- Problem of additivity (adding together assets bought at different times)
- Can overstate profits in times of rising prices, with distribution of profits leading to an erosion of operating capacity

(b) (i)

Straight-line depreciation expense = (1/life) x (cost - salvage)
3,000 = 1/5 x ($20,000 – S.V.)

Therefore, Salvage value = $5,000

(ii)

DDB Depreciation expense and accumulated depreciation = 2/5 x $20,000 = $8,000

Income Statement		
Sales revenue	$20,000	
Cost of goods sold	9,000	
Gross profit	11,000	
Depreciation (Note 1)	8,000	
Net income	$ 3,000	
Balance Sheet		
Current assets		$44,000
Equipment	$20,000	
Accumulated depreciation	8,000	12,000
Total assets		$56,000
Liabilities (all current)		$45,000
Shareholders' equity		11,000
Total liabilities & shareholders' equity		$56,000

(iii)

	Straight-line	DDB
Current ratio	0.98	0.98
Debt/Equity	2.81	4.09
Debt/Assets	0.74	0.80

The current ratio is not affected by alternative depreciation methods used because the measure of current assets and current liabilities is not influenced by depreciation measurements. However, total assets and net income (retained earnings portion of shareholders' equity) are decreased when the double-declining-balance depreciation method is used instead of straight-line. Hence, the debt/assets and debt/equity ratios increased (deteriorated) when the accelerated depreciation method is applied during the early portion of the asset's life.

Question 4:

(a) On 1 January 2019, Zuma Incorporated plans to issue long-term debt in order to obtain money required to finance the purchase of equipment. It will have to pay a market rate of interest of 10% on this borrowed money.

Zuma is considering two different financial instruments in order to obtain $10,494. The first instrument being considered is a 3-year, 12%, $10,000 note with interest payable every December 31 over the life of the note. Alternatively, a 3-year, non-interest-bearing note with maturity value of $13,657 will be issued.

(4 marks) Discuss the impact on Zuma's 1 January 2019 balance sheet and 2019 income statement if Zuma chooses to issue the non-interest-bearing note instead of the 10% note.

(b) (6 marks) Explain how the following transactions affect the current liabilities of a company:

(i) Purchased supplies on account.

(ii) Paid accounts payable.

(iii) Issued a $1,000 short-term note payable for $970.

(iv) A portion of long-term debt is due next year.

(v) Declared cash dividends to holders of stock.

(vi) Paid the cash dividend previously declared.

(vii) Received money from customers prior to delivery of the product to the customer.

(viii) Delivered products to a customer who previously paid for that product.

(ix) Accrued a bonus amounting to 5% on reported income to the CEO.

(x) In a lawsuit filed against the firm, counsel indicates that the potential $10,000 loss is remote.

Answer:

(a) The present value of both financial instruments on 1 January 2019, at an 10% market rate of interest is $10,494. Because each note payable would be carried on the balance sheet at its present value, Standard's 1 January 2019, balance sheet would be unaffected by the choice of financial instruments issued. The presentation under each of the alternative liabilities at 1 January 2019 would be:

	Non-Interest-Bearing Note	12% Note
Maturity value	$13,657	$10,000
Premium (discount)	(3,163)	494
Net book value	$10,494	$10,494

Because interest expense is the market rate of interest times the carrying value at the beginning of the year, during 2019 interest expense would also be the same. Under either financial instrument, interest expense would be .10 x $10,494 = $1,049. Net income for 2019 would be unaffected by the choice of notes

(b) The liabilities would be affected as follows:

(i) Increase Current Liabilities

(ii) Decrease Current Liabilities

(iii) Increase Current Liabilities

(iv) Increase Current Liabilities

(v) Increase Current Liabilities

(vi) Decrease Current Liabilities

(vii) Increase Current Liabilities

(viii) No Effect on Current Liabilities

Question 5:

(a) On 31 May 2018 (its financial year-end), Skye Limited has $375,800 of accounts receivable. Skye Limited uses the allowance method of accounting for bad debts and has an existing credit balance in the allowance for doubtful accounts of $14,250.

(4 marks) Prepare journal entries to record each of the following events for Skye Limited.

(i) Sold $415,200 of merchandise (that cost $249,000) to customers on credit.

(ii) Received $465,800 cash in payment of accounts receivable

(iii) Wrote off $15,800 of uncollectible accounts receivable.

(iv) In adjusting the accounts on 31 May 2018, the company estimated that 4.0% of accounts receivable will be uncollectible.

(b) Marshall Farms is an American based company that exports wheat to Bundesbakery, a bakery based in Germany. Marshall Farms reports its financial statements using the U.S. dollars, while Bundesbakery only accepts Euros.

(6 marks) Prepare journal entries to record each of the following events for Marshall Farms.

(i) **15 Nov 2010**: Marshall Farms sold wheat to Bundesbakery at a price of 2 million Euros, due in 90 days. The current exchange rate is 0.8 U.S. dollars per Euro. (Note that Marshall Farms uses the periodic inventory method.)

(ii) **3 Dec 2010:** Marshall Farms made a year-end adjusting entry relating to the account receivable from Bundesbakery. The exchange rate at year-end is 0.85 U.S. dollars per Euro.

(iii) **15 Feb 2011**: Received a check for $1,640,000 from Deutsche Bank in full settlement of the receivable from Bundesbakery. The exchange rate at this date is 0.82 U.S. dollars per Euro.

Answer:

(a)

(i)	Accounts Receivables	415,200	
	Sales		415,200
	Cost of Goods Sold	249,000	
	Merchandise Inventory		249,000
(ii)	Cash	465,800	
	Accounts Receivables		465,800
(iii)	Allowance for Doubtful Account	15,800	
	Accounts Receivables		15,800
(iv)	Bad Debt Expense	13,926	
	Allowance for Doubtful Account		13,926

(b)

(i)	Accounts Receivables	1,600,000	
	Sales		1,600,000
	2 mil x 0.8 USD per Euro		
(ii)	Accounts Receivables	100,000	
	Gains on fluctuations in foreign exchange rate		100,000

Original Balance 1,600,000
Adjusted Balance 1,700,000 (2mil x 0.85 USD per Euro)
Required Adjustment = 100,000

(iii)	Cash	1,640,000	
	Loss on fluctuations in foreign exchange rate	60,000	
	Accounts Receivables		1,700,000

Adjusted Balance 1,700,000
Amount Paid 1,640,000
Loss from decline in exchange rate 60,000

- End of Paper -