



King Saud University

Department of Mathematics

First Trimester 1446 H

Midterm Exam

Actuarial Corporate Finance

ACTU 262, Duration:2 Hours

Name:

Sequence Number:

Section:

Date: 10/9/2024

Note: The exam consists of 4 pages

<u>Question</u>	Mark
Exercise 1 (MCQ)	5
Exercise 2	4
Exercise 3	6
Exercise 4	5
Total	20

Exercise 1 (MCQ)

1. A business organized as a separate legal entity is a

- a) corporation.
- b) proprietor.
- c) government unit.
- d) partnership.

2. Which of the following terms is defined as managing a firm's long-term investments?

- a) Working capital management.
- b) Financial allocation
- c) Capital budgeting.
- d) Capital structure

3. Which one of the following is defined as a firm's short-term assets and its short-term liabilities?

- a) Working capital.
- b) Investment capital.
- c) Net capital.
- d) Capital structure

4. Which one of the following terms is defined as a conflict of interest between the corporate shareholders and the corporate managers?

- a) Articles of incorporation.
- b) Corporate breakdown.
- c) Agency problem.
- d) Legal liabilities.

5. The primary goal of the financial management is _____

- a) to minimize the costs.
- b) to minimize the risk.
- c) to maximize the wealth of owners.
- d) To minimize the interests.

Exercise 2 [4]

a) What is the balance sheet identity?

Total Asset= Total Liabilities + Share Holder's Equity

①

b) Create a balance sheet from data of the following table:

Supplies \$ 1,298.00	Inventory \$ 3,200.00	Office Equipment \$ 10,400.00
Prepaid Insurance \$ 300.00	Mortgage Payable \$ 13,400.00	Cash \$ 5,400.00
Accounts Payable \$ 500.00	Building \$ 20,800.00	Notes Payable \$ 1,800.00

Answer

Asset

Liabilities

Current asset

Current Liabilities

Cash 5,400.00

Accounts Payable 500.00

Inventory 3,200.00

Notes Payable 1,800.00

Supplies 1,298.00

Long-term

Prepaid Insurance 300.0

Mortgage Payable 13,400.00

Long-term asset

total Liabilities 15700

Office Equipment 10,400

Building 20,800.00

owner equity 25,,698

Total assets

Total liabilities and equities

41,398

41,398

③

Exercise 3 [6]

You are given the following information about SMOLIRA GOLF company:

SMOLIRA GOLF 2008 and 2009 Balance Sheets				
Assets			Liabilities and Owners' Equity	
	2008	2009	2008	2009
Current assets			Current liabilities	
Cash	\$21,860	\$ 22,050	Accounts payable	\$ 19,320 \$ 22,850
Accounts receivable	11,316	13,850	Notes payable	10,000 9,000
Inventory	<u>23,084</u>	<u>24,650</u>	Other	<u>9,643</u> <u>11,385</u>
Total	<u>\$56,260</u>	<u>\$ 60,550</u>	Total	<u>\$ 38,963</u> <u>\$ 43,235</u>
			Long-term debt	\$ 75,000 \$ 85,000
Fixed assets			Owners' equity	
Net plant and equipment	<u>234,068</u>	<u>260,525</u>	Common stock and paid-in surplus	\$ 25,000 \$ 25,000
			Accumulated retained earnings	<u>151,365</u> <u>167,840</u>
Total assets	<u>\$290,328</u>	<u>\$321,075</u>	Total	<u>\$176,365</u> <u>\$192,840</u>
			Total liabilities and owners' equity	<u>\$290,328</u> <u>\$321,075</u>

SMOLIRA GOLF, Inc. 2009 Income Statement	
Sales	\$305,830
Cost of goods sold	210,935
Depreciation	<u>26,850</u>
Earnings before interest and taxes	\$ 68,045
Interest paid	<u>11,930</u>
Taxable income	\$ 56,115
Taxes (35%)	<u>19,640</u>
Net income	<u>\$ 36,475</u>
Dividends	\$20,000
Retained earnings	16,475

For **2009**, calculate the cash flow from assets, cash flow to creditors, and cash flow to stockholders.

Answer:

We can now pick up the figures we need to get operating cash flow:

Operating cash flow

Earnings before interest and taxes	68,045
+Depreciation	26,850
- Taxes	19,640
Operating cash flow	\$75,255

Next, we get the net capital spending for the year by looking at the change in fixed assets, remembering to account for depreciation:

Ending net fixed assets	260,525
- Beginning net fixed assets	234,068
+ Depreciation	26,850
Net capital spending	53,307

After calculating beginning and ending NWC, we take the difference to get the change in NWC:

Ending NWC	\$17,315
-Beginning NWC	\$17,297
Changing NWC	\$18

We now combine operating cash flow, net capital spending, and the change in net working capital to get the total cash flow from assets:

Operating cash flow	75,255
-Net capital spending	53,307
-Change in NWC	\$18
Cash flow from assets	\$21,930

Cash flow to the creditor:

Interest paid	11,930
-Net new borrowing	10,000
Cash flow to creditors	\$1,930

Cash flow to the stockholder:

Cash flow to stockholder = Dividends paid - Net new equity raised

$$= 20,000 - 0 = \$20,000$$

①

Also,

Cash flow to stockholder = Cash flow from assets - Cash flow to the creditor

$$= \$21,930 - 1,930 = 20,000$$

Exercise 4 [5]

Papa Roach Exterminators, inc., has sales of \$586,000, cost of \$247,000, a depreciation expense of \$34,000, an interest expense of \$32,000, and a tax rate of 35 percent.

- 1) What is the net income for this firm?
- 2) Suppose the firm paid out \$73,000 in cash dividends. What is the addition to retained earnings?
- 3) Suppose the firm had 85,000 shares of common stock outstanding. What is the earning per share, or EPS, Figure? What is the dividends per share figure?

Answer

1)

Income Statement

Sales	\$586,000
Costs	247,000
Depreciation	34,000
Earning before interest and Tax	305,000
Interest paid	32,000
Taxable income	273,000
Taxes	95,550
Net income	177,450

2

B)

$$\begin{aligned} \text{Addition to retained earnings} &= \text{Net income} - \text{Dividends} \\ &= 177,450 - 73,000 = \$ 104,450 \end{aligned}$$

1

C)

$$\begin{aligned} \text{Earnings per share} &= \text{Net income} / \text{Total shares outstanding} \\ &= \$177,450 / 85,000 = \$2.087 \text{ per share} \end{aligned}$$

1

Dividends per share = Total dividends/Total shares outstanding
= \$73,000/85,000 = \$.8588 per share

①