



King Saud University

College of Science

Department of Mathematics

Midterm Examination

ACTU 262 Actuarial Corporate Finance

2/3/1445 H - 17/9/2023 G Duration 1H:30

Name:

Sequence Number:

Section:

Note: The exam consists of 6 pages

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Exercise 1. [6]

1. Which of the following enjoys limited liability?

- a) A general partnership.
- b) A corporation.
- c) A sole proprietorship.
- d) None of the above.

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

- a) Working capital management.
- b) Financial allocation
- c) Agency cost analysis.
- d) Capital budgeting.
- e) Capital structure

3. A major advantage of the corporate form of organization is:

- a) Reduction of double taxation.
- b) Limited owner liability.
- c) Legal restrictions.
- d) Ease of organization.

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

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

5. Financial Management is mainly concerned with

- a) arrangement of funds.
- b) all aspects of acquiring and utilizing financial resources for firms' activities.
- c) efficient management of every business.
- d) profit maximization.

6. In his traditional role, the finance manager is responsible for:

- a) Arrange of utilization of funds.
- b) Arrangement of financial resources.
- c) Acquiring capital assets of the organization.
- d) Effective management of capital.

Exercise 2 [4]

Use the following information to calculate for the year ended December 31, 2022.

- (a) Net Income
- (b) Ending Retained Earnings
- (c) Total Assets

Supplies	\$ 1,500	Service revenue	\$19,000
Other operating expenses	10,000	Cash	15,000
Accounts payable	11,000	Dividends	6,000
Accounts receivable	4,000	Notes payable	1,000
Common stock	10,000	Equipment	9,500
Retained earnings (beginning)	5,000		

ANSWER:

Answer:

a. \$9,000

b. \$8,000

c. \$30,000

(1)
(1.5)
(1.5)

Explanation:

a. Calculation to determine the Net income / (net loss)

Using this formula

Net Income = Revenues - Operating Expenses

Let plug in the morning

Net Income = \$19,000 - \$10,000

Net Income = \$9,000

Therefore the Net income is \$9,000

b. Calculation to determine Ending Retained Earnings

Using this formula

Ending Retained Earnings = Retained Earnings at the beginning + Net Income
- Dividends paid

Let plug in the morning

Ending Retained Earnings = \$5,000 + \$9,000 - \$6,000

Ending Retained Earnings = \$8,000

Therefore Ending Retained Earnings \$8,000

c. Calculation to determine the Total Assets

Using this formula

Total Assets = Supplies + Accounts receivables + cash + Equipments

Let's plug in the formula

Total Assets = \$1,500 + \$4,000 + \$15,000 + \$9,500

Total Assets = \$30,000

Therefore Total assets is \$30,000

Exercise 3. [4]

Papa Roach Exterminators, Inc., has sales of \$586,000, costs of \$247,000, depreciation expense of \$43,000, interest expense of \$32,000, and a tax rate of 35 percent.

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

ANSWER

Income statement

Sales	586,000
Costs	247,000
Depreciation	43,000
EBIT	296,000
Interest	32,000
Taxable income	264,000
Taxes (0.35)	92,400
Net income	171,600
Dividend	73,000

addition to return earning 98,600

1- Net income= 171,600

2- Addition to retained earning= net income- dividend
= 171,600-73,000
=98,600

3- EPS= net income/ number of share
= 171,600/85,000 = 2.02

4- DPS=Dividened/ number of share
= 73,000/85,000
= 0.86 per share

Exercise 4. [6]

Dahlia Industries had the following operating results for 2009: sales \$22,800; cost of goods sold \$16,050; depreciation expense \$4,050; interest expense \$1,830; dividends paid \$1,300. At the beginning of the year, net fixed assets were \$13,650, current assets were \$4,800, and current liabilities were \$2,700. At the end of the year, net fixed assets were \$16,800, current assets were \$5,930, and current liabilities were \$3,150. The tax rate for 2009 was 34 percent.

- a) What is net income for 2009?
- b) What is the operating cash flow for 2009?
- c) What is the cash flow from assets for 2009?
- d) If no new debt was issued during the year, what is the cash flow to creditors?
What is the cash flow to stockholders?

ANSWER

1. Sales = \$22,800
2. COGS = \$16,050
3. Depreciation Expense = \$4,050
4. Interest Expense = \$1,830
5. Dividends Paid = \$1,300
6. Tax Rate = 34%

	Beginning of Year	End of Year
Net Fixed Assets	\$13,650	\$16,800
Current Assets	\$4,800	\$5,930
Current Liabilities	\$2,700	\$3,150

Income Statement 2009	
Sales	\$22,800
COGS	\$(16,050)
Depreciation Expense	\$(4,050)
EBIT	\$2,700
Interest Expense	\$(1,830)
EBT	\$870
Taxes (34%)	\$(295.80)
Net Income	\$574.20

a)

2

b)

	EBIT	2,700
+	Depreciation	4,050
-	Tax	295.8
	Operating Cash Flow	6454.2

1

c)

	Ending Net Fixed Assets	16,800
-	Beginning Fixed	13,650
+	Depreciation	4,050
	Net Capital Spending	7,200

2

	Ending Net Working Capital	2,780
-	Beginning Net Working Capital	2,100
	Change in Net Working Capital	680

1

	Operating Cash Flow	6,454.2
-	Net Capital Spending	7,200
-	Change in NWC	680
	Cash Flow from Assets	-1425.8

①

e)

	Interest	1,830
-	Net New Borrowing	0
	Cash Flow to Creditors	1,830

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By the Balance Sheet Identity:

Cash Flow to Stockholders = Cash Flow from Assets – Cash Flow to Creditors

Cash Flow to Stockholders = -1,425.8 – 1,830 = -3255.80

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