

Intermediate Accounting, Vol. 2, 3e (Lo/Fisher)
Chapter 12 Non-current Financial Liabilities

12.1 Learning Objective 1

1) Which statement best explains the concept of "leverage"?

- A) A measure of the efficiency of the company.
- B) A measure of solvency of the company.
- C) A measure of the company's operations.
- D) A measure of the company's debt paying ability.

Answer: B

Diff: 1 Type: MC

Skill: Concept

Objective: 12.1 Describe financial leverage and its impact on profitability.

2) What are "non-current liabilities"?

- A) Obligations that are expected to be settled in the next operating cycle of the company.
- B) Obligations that are expected to be settled within the next 12 months.
- C) Obligations that are expected to be settled more than 12 months after the company's year-end.
- D) Obligations that are expected to be settled more than 24 months after the company's year-end.

Answer: C

Diff: 2 Type: MC

Skill: Concept

Objective: 12.1 Describe financial leverage and its impact on profitability.

3) Which of the following would be a "non-current liability"?

- A) Payment due after 3 years, but the company has violated the debt covenants.
- B) Payment due to a supplier 45 days after year-end for supplies received before year-end.
- C) Payment due to a supplier in 18 months for goods to be received 3 months after year-end.
- D) Payment due after 3 years, on which the debt covenants have been not been violated.

Answer: D

Diff: 2 Type: MC

Skill: Concept

Objective: 12.1 Describe financial leverage and its impact on profitability.

4) Which statement is correct about financial leverage?

- A) It reduces the risk of bankruptcy to the company.
- B) It reduces the level of risk exposure of the shareholders.
- C) It quantifies the relationship between the relative level of a firm's debt and its equity base.
- D) It has nothing to do with the relationship between the relative level of a firm's debt and its equity base.

Answer: C

Diff: 2 Type: MC

Skill: Concept

Objective: 12.1 Describe financial leverage and its impact on profitability.

5) Which statement best explains a "leveraged buyout"?

- A) A purchase where a small portion of the purchase price is raised by borrowing against the acquired assets.
- B) A purchase where a significant portion of the purchase price is raised by borrowing against the acquired assets.
- C) A purchase that is deemed too risky from a solvency perspective for the shareholders.
- D) A purchase that is deemed too risky from a solvency perspective for the bondholders.

Answer: B

Diff: 2 Type: MC

Skill: Concept

Objective: 12.1 Describe financial leverage and its impact on profitability.

6) Which statement is correct about financial leverage?

- A) Leverage can increase an investor's returns but also increases the risk of loss.
- B) Leverage can decrease an investor's returns and also decrease the risk of loss.
- C) Leverage decreases the payments that a company makes on an ongoing basis.
- D) Leverage decreases the debt level relative to a company's equity base.

Answer: A

Diff: 2 Type: MC

Skill: Concept

Objective: 12.1 Describe financial leverage and its impact on profitability.

7) Which statement is correct about the financial leverage of a company with an equity base of \$400,000?

- A) A company that borrows \$150,000 is more leveraged than a company that borrows \$250,000.
- B) A company that borrows \$250,000 is more leveraged than a company that borrows \$150,000.
- C) The return on equity of the company is unaffected by the financial leverage.
- D) The return on equity of the company will be higher if it has a lower leverage.

Answer: B

Diff: 2 Type: MC

Skill: Concept

Objective: 12.1 Describe financial leverage and its impact on profitability.

8) Which statement is **not** correct about financial leverage for a \$300,000 investment versus a \$100,000 investment?

- A) The probability of success is the same under both investment options.
- B) The payout will be 3 times higher or 3 times lower with the larger investment.
- C) The probability of success is 3 times greater with the larger investment.
- D) The larger investment increases the return on equity but also faces a greater potential for loss.

Answer: C

Diff: 2 Type: MC

Skill: Concept

Objective: 12.1 Describe financial leverage and its impact on profitability.

9) Explain the meaning of financial leverage and leveraged buyout.

Answer:

financial leverage: Quantifies the relationship between the relative level of a firm's debt and its equity base.

leveraged buyout: A purchase where a significant part of the purchase price is raised by borrowing against the acquired assets.

Diff: 1 Type: SA

Skill: Concept

Objective: 12.1 Describe financial leverage and its impact on profitability.

10) What are some considerations in determining a safe level of debt?

Answer: Considerations include:

- a) the nature of the industry
- b) degree of operating leverage
- c) stability of cash flows
- d) competition
- e) economic outlook.

Diff: 2 Type: SA

Skill: Concept

Objective: 12.1 Describe financial leverage and its impact on profitability.

12) Bank Buy Inc. is in the process of acquiring another business. In light of the acquisition, shareholders are currently re-evaluating the appropriateness of the firm's capital structure (the types of and relative levels of debt and equity). The two proposals being contemplated are detailed below:

	Proposal 1	Proposal 2
Estimated earnings before interest and taxes (EBIT)	900,000	900,000
Long term debt	4,000,000	4,500,000
Market value of equity	4,000,000	5,500,000
Interest rate on long term debt	14%	14%
Tax rate	25%	25%

Required:

- Calculate the estimated return on equity (ROE) under the two proposals. (ROE = net income after taxes / market value of equity; net income after taxes = (EBIT - interest on long-term debt) × (1 - tax rate)).
- Which proposal will generate the higher estimated ROE?
- What is the primary benefit of leveraging an investment decision? What are two drawbacks to leveraging an investment decision?

Answer:

a.	Proposal one		Proposal two	
Estimated EBIT		\$900,000		\$900,000
Less: Interest	$\$4,000,000 \times 14\%$	<u>560,000</u>	$\$4,500,000 \times 14\%$	<u>630,000</u>
Income before taxes		340,000		270,000
Income taxes	$\$340,000 \times 25\%$	<u>85,000</u>	$\$270,000 \times 25\%$	<u>67,500</u>
Net income after taxes		<u>\$255,000</u>		<u>\$202,500</u>
ROE (Net income / Market value of equity)	$\$255,000 / \$4,000,000$	6.4%	$\$202,500 / \$5,500,000$	3.7%
b. Proposal one results in the higher of the two estimated ROEs				
c. The primary benefit to the shareholders of leveraging are higher envisaged return. Drawbacks to increased financial leverage include a heightened risk of loss if estimates are not realized and an increased risk of bankruptcy.				

Diff: 2 Type: ES

Skill: Comp

Objective: 12.1 Describe financial leverage and its impact on profitability.

13) Blue Corp is in the process of acquiring another business. In light of the acquisition, shareholders are currently re-evaluating the appropriateness of the firm's capital structure (the types of and relative levels of debt and equity). The two proposals being contemplated are detailed below:

	Proposal 1	Proposal 2
Estimated earnings before interest and taxes (EBIT)	450,000	450,000
Long term debt	1,000,000	2,000,000
Market value of equity	1,000,000	500,000
Interest rate on long term debt	10%	10%
Tax rate	25%	25%

Required:

- Calculate the estimated return on equity (ROE) under the two proposals. (ROE = net income after taxes / market value of equity; net income after taxes = (EBIT - interest on long-term debt) × (1 - tax rate)).
- Which proposal will generate the higher estimated ROE?
- What is the primary benefit of leveraging an investment decision? What are two drawbacks to leveraging an investment decision?

Answer:

a.	Proposal one		Proposal two	
Estimated EBIT		\$450,000		\$450,000
Less: Interest	$\$1,000,000 \times 10\%$	<u>100,000</u>	$\$2,000,000 \times 10\%$	<u>200,000</u>
Income before taxes		350,000		250,000
Income taxes	$\$350,000 \times 25\%$	<u>87,500</u>	$\$250,000 \times 25\%$	<u>62,500</u>
Net income after taxes		<u>\$262,500</u>		<u>\$187,500</u>
ROE (Net income / Market value of equity)	$\$262,500 / \$1,000,000$	26%	$\$187,500 / \$500,000$	38%
b. Proposal 2 results in the higher of the two estimated ROEs				
c. The primary benefit to the shareholders of leveraging are higher envisaged return. Drawbacks to increased financial leverage include a heightened risk of loss if estimates are not realized and an increased risk of bankruptcy.				

Diff: 2 Type: ES

Skill: Comp

Objective: 12.1 Describe financial leverage and its impact on profitability.

14) Universal Inc. is in the process of acquiring another business. In light of the acquisition, shareholders are currently re-evaluating the appropriateness of the firm's capital structure (the types of and relative levels of debt and equity). The two proposals being contemplated are detailed below:

	Proposal 1	Proposal 2
Estimated earnings before interest and taxes (EBIT)	750,000	750,000
Long term debt	3,000,000	4,000,000
Market value of equity	3,000,000	3,500,000
Interest rate on long term debt	5%	5%
Tax rate	20%	20%

Required:

a. Calculate the estimated return on equity (ROE) under the two proposals. (ROE = net income after taxes / market value of equity; net income after taxes = (EBIT - interest on long-term debt) × (1 - tax rate)).

b. Which proposal will generate the higher estimated ROE?

Answer:

a.	Proposal one		Proposal two	
Estimated EBIT		\$750,000		\$750,000
Less: Interest	$\$3,000,000 \times 5\%$	<u>150,000</u>	$\$4,000,000 \times 5\%$	<u>200,000</u>
Income before taxes		600,000		550,000
Income taxes	$\$600,000 \times 20\%$	<u>120,000</u>	$\$550,000 \times 20\%$	<u>110,000</u>
Net income after taxes		<u>\$480,000</u>		<u>\$440,000</u>
ROE (Net income / Market value of equity)	$\$480,000 / \$3,000,000$	16%	$\$440,000 / \$3,500,000$	13%
b. Proposal 1 results in the higher of the two estimated ROEs				

Diff: 2 Type: ES

Skill: Comp

Objective: 12.1 Describe financial leverage and its impact on profitability.

15) Fast Track Inc. is in the process of acquiring another business. In light of the acquisition, shareholders are currently re-evaluating the appropriateness of the firm's capital structure (the types of and relative levels of debt and equity). The two proposals being contemplated are detailed below:

	Proposal 1	Proposal 2
Estimated earnings before income tax (EBIT)	600,000	600,000
Long term debt	3,000,000	4,000,000
Market value of equity	3,000,000	3,500,000
Interest rate on long term debt	5%	5%
Tax rate	20%	20%

Required:

- Calculate the estimated return on equity (ROE) under the two proposals. (ROE = net income after taxes / market value of equity; net income after taxes = (EBIT - interest on long-term debt) × (1 - tax rate)).
- Which proposal will generate the higher estimated ROE?

Answer:

a.	Proposal one		Proposal two	
Estimated EBIT		\$600,000		\$600,000
Less: Interest	$\$3,000,000 \times 5\%$	150,000	$\$4,000,000 \times 5\%$	200,000
Income before taxes		450,000		400,000
Income taxes	$\$450,000 \times 20\%$	90,000	$\$400,000 \times 20\%$	80,000
Net income after taxes		<u>\$360,000</u>		<u>\$320,000</u>
ROE (Net income / Market value of equity)	$\$360,000 / \$3,000,000$	12%	$\$320,000 / \$3,500,000$	9%
b. Proposal 1 results in the higher of the two estimated ROEs				

Diff: 2 Type: ES

Skill: Comp

Objective: 12.1 Describe financial leverage and its impact on profitability.

16) Sally has to decide between the following two options:

1) Take out a student loan of \$60,000 and study accounting full time for the next three years. The interest on the loan is 5% per year payable annually. The principle to be paid in full after ten years.

2) Study part time and work part time to earn \$20,000 per year for the following six years.

Once Sally graduates, she estimates that she will earn \$35,000 for the first three years and \$50,000 the next four years.

Sally's banker says the market interest for a ten-year horizon is 7%.

Required:

a. Calculate NPV of the ten-year cash flows of the two options. For simplification assume that all cash flows happen at year-end.

b. Based on the NPV which of the two options is better for Sally?

c. What is the primary benefit of leveraging an investment decision? What are two drawbacks to leveraging an investment decision?

Answer:

a.		Option 1			Option 2		
Year	Loan	Interest	Income	Net cashflow	NPV	Income	NPV
0	\$ 60,000			60,000	\$ 60,000.00		
1		(3,000)	-	(3,000)	(\$ 2,803.74)	20,000	\$ 18,691.59
2		(3,000)	-	(3,000)	(\$ 2,620.32)	20,000	\$ 17,468.77
3		(3,000)	-	(3,000)	(\$ 2,448.89)	20,000	\$ 16,325.96
4		(3,000)	35,000	32,000	\$ 24,412.65	20,000	\$ 15,257.90
5		(3,000)	35,000	32,000	\$ 22,815.56	20,000	\$ 14,259.72
6		(3,000)	35,000	32,000	\$ 21,322.95	20,000	\$ 13,326.84
7		(3,000)	35,000	47,000	\$ 29,269.24	35,000	\$ 21,796.24
8		(3,000)	50,000	47,000	\$ 27,354.43	35,000	\$ 20,370.32
9		(3,000)	50,000	47,000	\$ 25,564.89	35,000	\$ 19,037.68
10	(\$60,000)	(3,000)	50,000	(13,000)	(\$ 6,608.54)	50,000	\$ 25,417.46
Total					\$ 196,258.22		\$ 181,952.50

b. Option 1 results in a higher NPV. Based on this criteria alone, Sally should select this option.

c. The primary benefit of leveraging is the higher envisaged return. Drawbacks to increased financial leveraging include a heightened risk of loss if estimates are not realized and an increased risk of bankruptcy.

Diff: 3 Type: ES

Skill: Comp

Objective: 12.1 Describe financial leverage and its impact on profitability.

17) Sally has to decide between the following two options:

1) Take out a student loan of \$70,000 and study accounting full time for the next three years. The interest on the loan is 4% per year payable annually. The principle to be paid in full after ten years.

2) Study part time and work part time to earn \$15,000 per year for the following six years.

Once Sally graduates she estimates that she will earn \$30,000 for the first three years and \$40,000 the next four years.

Sally's banker says the market interest for a ten-year horizon is 6%.

Required:

a. Calculate NPV of the ten-year cash flows of the two options. For simplification assume that all cash flows happen at year-end.

b. Based on the NPV which of the two options is better for Sally?

c. What is the primary benefit of leveraging an investment decision? What are two drawbacks to leveraging an investment decision?

Answer:

a. Year	Option 1				Option 2		
	Loan	Interest	Income	Net cash flow	NPV	Income	NPV
0	\$70,000			70,000	\$ 70,000		
1		(2,800)	-	(2,800)	(\$ 2,641.51)	15,000	\$ 14,150.94
2		(2,800)	-	(2,800)	(\$ 2,491.99)	15,000	\$ 13,349.95
3		(2,800)	-	(2,800)	(\$ 2,350.93)	15,000	\$ 12,594.29
4		(2,800)	30,000	27,200	\$ 21,544.95	15,000	\$ 11,881.40
5		(2,800)	30,000	27,200	\$ 20,325.42	15,000	\$ 11,208.87
6		(2,800)	30,000	27,200	\$ 19,174.93	15,000	\$ 10,574.41
7		(2,800)	40,000	37,200	\$ 24,740.12	30,000	\$ 19,951.71
8		(2,800)	40,000	37,200	\$ 23,339.74	30,000	\$ 18,822.37
9		(2,800)	40,000	37,200	\$ 22,018.62	30,000	\$ 17,756.95
10	(\$70,000)	(2,800)	40,000	(32,800)	(\$ 18,315.35)	40,000	\$ 22,335.79
Total					\$ 175,344.00		\$ 152,626.69

b. Option 1 results in a higher NPV. Based on this criteria alone, Sally should select this option.

c. The primary benefit of leveraging is the higher envisaged return. Drawbacks to increased financial leveraging include a heightened risk of loss if estimates are not realized and an increased risk of bankruptcy.

Diff: 3 Type: ES

Skill: Comp

Objective: 12.1 Describe financial leverage and its impact on profitability.

18) Sally has to decide between the following two options:

1) take out a student loan of \$80,000 and study accounting full time for the next three years. The interest on the loan is 3% per year payable annually. The principle to be paid in full after ten years.

2) study part time and work part time to earn \$20,000 per year for the following six years.

Once Sally graduates she estimates that she will earn \$35,000 for the first three years and \$45,000 the next four years.

Sally's banker says the market interest for a ten-year horizon is 6%.

Required:

a. Calculate NPV of the ten-year cash flows of the two options. For simplification assume that all cash flows happen at year end.

b. Based on the NPV which of the two options is better for Sally?

c. What is the primary benefit of leveraging an investment decision? What are two drawbacks to leveraging an investment decision?

Answer:

a.		Option 1				Option 2	
Year	Loan	Interest	Income	Net cash flow	NPV	Income	NPV
0	\$ 80,000			80,000	\$ 80,000.00		
1		(2,400)	-	(2,400)	(\$ 2,264.15)	20,000	\$ 18,867.92
2		(2,400)	-	(2,400)	(\$ 2,135.99)	20,000	\$ 17,799.93
3		(2,400)	-	(2,400)	(\$ 2,015.09)	20,000	\$ 16,792.39
4		(2,400)	35,000	32,600	\$ 25,822.25	20,000	\$ 15,841.87
5		(2,400)	35,000	32,600	\$ 24,360.62	20,000	\$ 14,945.16
6		(2,400)	35,000	32,600	\$ 22,981.71	20,000	\$ 14,099.21
7		(2,400)	45,000	42,600	\$ 25,331.43	35,000	\$ 23,277.00
8		(2,400)	45,000	42,600	\$ 26,727.77	35,000	\$ 21,959.43
9		(2,400)	45,000	42,600	\$ 25,214.87	35,000	\$ 20,716.45
10	(\$80,000)	(2,400)	45,000	(37,400)	(\$ 20,883.96)	45,000	\$ 25,127.76
Total					\$ 206,139.46		\$189,427.13

b. Option 1 results in a higher NPV. Based on this criteria alone, Sally should select this option.

c. The primary benefit of leveraging is the higher envisaged return. Drawbacks to increased financial leveraging include a heightened risk of loss if estimates are not realized and an increased risk of bankruptcy.

Diff: 3 Type: ES

Skill: Comp

Objective: 12.1 Describe financial leverage and its impact on profitability.

12.2 Learning Objective 2

1) Why do bonds often include covenants?

- A) To reduce information asymmetry.
- B) To reduce moral hazard.
- C) To compensate for value-added services.
- D) To ensure repayment of the bond.

Answer: B

Diff: 1 Type: MC

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

2) What is a "covenant"?

- A) Guarantee of the price to the borrower.
- B) Contract that outlines the terms of the borrowing agreement.
- C) Promise from the borrower to restrict certain activities.
- D) Feature that permits the issuer to redeem before maturity.

Answer: C

Diff: 2 Type: MC

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

3) What are "secured bonds"?

- A) Bonds that never mature.
- B) Bonds that protect investors against inflation.
- C) Bonds that mature at different dates.
- D) Bonds backed by specific collateral.

Answer: D

Diff: 2 Type: MC

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

4) What are "zero-coupon bonds"?

- A) Bonds that pay the market rate of interest.
- B) Bonds that are unsecured.
- C) Bonds that do not pay interest.
- D) Bonds that are sold at a premium.

Answer: C

Diff: 2 Type: MC

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

5) What is a bond indenture?

- A) Guarantee of the price to the borrower.
- B) Contract that outlines the terms of the borrowing agreement.
- C) Promise from the borrower to restrict certain activities.
- D) Feature that permits the borrower to redeem before maturity.

Answer: B

Diff: 2 Type: MC

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

6) What is the "best efforts" approach?

- A) Broker's guarantee of the price to the borrower.
- B) Broker sells as much of the debt issue as possible.
- C) Debt that is backed by specific collateral.
- D) Feature that permits the issuer to redeem before maturity.

Answer: B

Diff: 2 Type: MC

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

7) What is "firm commitment" underwriting?

- A) Broker's guarantee of the price to the borrower.
- B) Broker sells as much of the debt issue as possible.
- C) Debt that is backed by specific collateral.
- D) Feature that permits the borrower to redeem before maturity.

Answer: A

Diff: 2 Type: MC

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

8) What are "debentures"?

- A) Bonds that are unsecured.
- B) Bonds that protect investors against inflation.
- C) Bonds that mature at different dates.
- D) Bonds backed by specific collateral.

Answer: A

Diff: 2 Type: MC

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

9) What are "stripped bonds"?

- A) Bonds that pay the market rate of interest.
- B) Bonds that are unsecured.
- C) Bonds that pay no interest and are sold at a discount.
- D) Bonds that are sold at a premium.

Answer: C

Diff: 2 Type: MC

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

10) What are "serial bonds"?

- A) Bonds that are seldom used in Canada.
- B) Bonds that mature at regular scheduled dates.
- C) Bonds that are sold at a discount.
- D) Bonds that are sold at a premium.

Answer: B

Diff: 2 Type: MC

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

11) What are "callable bonds"?

- A) Bonds that have cash flows indexed to inflation.
- B) Bonds that can be redeemed 1 year before maturity.
- C) Bonds that can be redeemed before maturity.
- D) Bonds that are sold at a premium.

Answer: C

Diff: 2 Type: MC

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

12) What is the role of debt rating agencies and what two benefits result from their rating a company?

Answer: Their role is to provide an independent and impartial evaluation of the riskiness of debt securities to assist investors in making educated decisions. Similar to an external audit, this evaluation by independent rating agencies (a) helps to reduce information asymmetry between bond issuers and investors which in turn (b) can reduce the cost of financing.

Diff: 1 Type: SA

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

13) Why do companies sell notes directly to the investing public?

Answer: Companies sell notes directly to the investing public to lower interest costs by reducing or eliminating the spread that banks charge for their value added services.

Explanation:

Diff: 1 Type: SA

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

14) What is meant by the "spread" charged by banks on loans?

Answer: It is the difference between the interest it pays on customer deposits and the interest it earns on loans.

Diff: 1 Type: SA

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

15) Why are banks able to pay such low interest rates on customer deposits?

Answer: Banks are able to offer a low rate on deposits because they offer a safe place for depositors to put their funds, whereas someone buying a note from a company faces significant information asymmetry about the company.

Diff: 1 Type: SA

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

16) What does an "AAA" credit rating mean?

Answer: The company's debt is of superior quality with a very low probability of default.

Diff: 1 Type: SA

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

17) Define the following:

- a) Financial liabilities
- b) A mortgage
- c) A bond indenture
- d) Secured bonds
- e) Debentures
- f) Stripped bonds
- g) Serial bonds
- h) Callable bonds
- i) Convertible bonds
- j) Inflation-linked or real-return bonds
- k) Perpetual bonds

Answer:

- a) **Financial liabilities** are contractual obligations to deliver cash or other financial assets to another party at a future date.
- b) A **mortgage** is a special type of note payable specifically secured by a charge over real estate.
- c) A **bond indenture** is the contract that outlines the terms of the bond, including the maturity date, rate of interest and interest payment dates, security pledged, and financial covenants.
- d) **Secured bonds** are bonds backed by specific collateral such as a mortgage on real estate.
- e) **Debentures** are unsecured bonds.
- f) **Stripped (zero-coupon) bonds** are bonds that do not pay interest. Stripped bonds are sold at a discount and mature at face value.
- g) **Serial bonds** are a set of bonds issued at the same time but that mature at regular scheduled dates rather than all on the same date.
- h) **Callable bonds** permit the issuing company to "call" for the bonds to be redeemed before maturity. A **call premium** is the excess over par value paid to the bondholders when the security is called.
- i) **Convertible bonds** allow the holder to exchange or "convert" the bond into other securities in the corporation, usually common shares.
- j) **Inflation-linked or real-return bonds** protect investors against inflation. The basic premise is that the cash flows are indexed to inflation.
- k) **Perpetual bonds** are bonds that never mature.

Diff: 1 Type: SA

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

18) What are the reasons for issuing bonds rather than using a bank loan?

Answer: Reasons for issuing bonds include (a) reducing the cost of borrowing and (b) accessing large amounts of capital.

Diff: 1 Type: SA

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

19) Contrast the two methods used by investment banks when selling bonds on behalf of a company, their client.

Answer: The more common method of underwriting is a firm commitment underwriting where the investment bank guarantees the borrower a price for the bonds, expecting to resell them to its investment clients at a profit. A lesser-used arrangement is a best efforts approach, where the broker simply agrees to try to sell as much of the issue as possible to investors.

Diff: 2 Type: SA

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

20) Why do lenders avoid lending large amounts of money to one borrower?

Answer: Lenders such as banks would rather have diversified holdings of loans such that the default of any single borrower will not entail severe consequences for the lender.

Diff: 2 Type: SA

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

21) Explain the difference between real-return bonds, convertible bonds and perpetual bonds.

Answer:

inflation-linked (real-return) bonds — Bonds that provide protection against inflation.

convertible bonds — Bonds that allow the holder to exchange or "convert" the bond into other securities in the corporation, usually common shares.

perpetual bonds — Bonds that never mature.

Diff: 2 Type: SA

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

22) Based on the characteristics provided below, what kind of bond is being discussed?

1. _____ are a set of bonds issued at the same time but that mature at regular scheduled dates rather than all on the same date.

2. _____ are bonds that never mature.

3. _____ allow the holder to exchange the bond into other securities in the corporation, usually common shares.

4. _____ protect investors against inflation.

Answer:

1. **Serial bonds** are a set of bonds issued at the same time but that mature at regular scheduled dates rather than all on the same date.

2. **Perpetual bonds** are bonds that never mature.

3. **Convertible bonds** allow the holder to exchange or "convert" the bond into other securities in the corporation, usually common shares.

4. **Inflation-linked or real-return bonds** protect investors against inflation.

Diff: 2 Type: SA

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

23) Based on the characteristics provided below, what kind of bond is being discussed?

1. _____ permit the issuing company to redeem before maturity.
2. _____ are bonds backed by specific collateral such as a mortgage on real estate.
3. _____ are unsecured bonds.
4. _____ are bonds that do not pay interest and are sold at a discount and mature at face value.

Answer:

1. **Callable bonds** permit the issuing company to "call" for the bonds to be redeemed before maturity.
2. **Secured bonds** are bonds backed by specific collateral such as a mortgage on real estate.
3. **Debentures** are unsecured bonds.
4. **Stripped (zero-coupon) bonds** are bonds that do not pay interest. Stripped bonds are sold at a discount and mature at face value.

Diff: 2 Type: SA

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

24) What are positive and negative covenants? Give an example of a positive and negative covenant.

Answer: Positive covenants require certain actions by the borrower; negative covenants forbid certain actions by the borrower. An example of a positive covenant is the borrower pledging to maintain its current ratio in excess of 1.5:1; a negative covenant is agreeing not to pay dividends in excess of \$1,000,000 per year.

Diff: 2 Type: SA

Skill: Concept

Objective: 12.2 Describe the categories and types of non-current liabilities.

12.3 Learning Objective 3

1) How should non-current financial liabilities be recorded initially?

- A) At face value.
- B) At fair value.
- C) At fair value less transaction costs.
- D) At face value less transaction costs.

Answer: C

Diff: 1 Type: MC

Skill: Concept

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

2) Non-current debt instruments exchanged for assets are recognized at:

- A) book value.
- B) fair value.
- C) cash paid.
- D) cash equivalents paid.

Answer: B

Diff: 1 Type: MC

Skill: Concept

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

- 3) What is the coupon rate?
- A) Yield on the issue date.
 - B) Amount to be repaid at maturity.
 - C) Rate of return earned by the investor.
 - D) Interest rate specified in the bond indenture.

Answer: D

Diff: 1 Type: MC

Skill: Concept

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

- 4) When will bonds sell at a discount?
- A) When the coupon rate is below the par value.
 - B) When the coupon rate is below the market rate.
 - C) When the coupon rate is above the market rate.
 - D) When the coupon rate is above the par value.

Answer: B

Diff: 1 Type: MC

Skill: Concept

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

- 5) A \$100,000 5-year 6% bond is issued on January 1, 2012. The bond pays interest annually. The market rate is 7%. What is the selling price of the bonds, rounded to nearest dollar?

- A) \$4,100
- B) \$95,900
- C) \$100,000
- D) \$104,213

Answer: B

Explanation: B) PV of coupon payments: $6,000 \text{ PVAV}(7\%,5) = 6,000 \times 4.1002 = 24,601$

PV of principal repayment: $100,000 \text{ PV}(7\%,5) = 71,299$

Total = $24,601 + 71,299 = 95,900$

Diff: 1 Type: MC

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

- 6) What is the market rate?
- A) Price of bond on issue date.
 - B) Amount to be repaid at maturity.
 - C) Rate of return earned by the investor.
 - D) Interest rate specified in the bond indenture.

Answer: C

Diff: 1 Type: MC

Skill: Concept

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

7) What is the effective interest rate?

- A) Yield on the issue date.
- B) Amount to be repaid at maturity.
- C) Price of bond on issue date.
- D) Interest rate specified in the bond indenture.

Answer: A

Diff: 1 Type: MC

Skill: Concept

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

8) When will bonds sell at a premium?

- A) When the coupon rate is equal to the par value.
- B) When the coupon rate is below the market rate.
- C) When the coupon rate is above the market rate.
- D) When the coupon rate is equal to market value.

Answer: C

Diff: 1 Type: MC

Skill: Concept

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

9) When will bonds sell without a premium or discount?

- A) When the coupon rate equals the par value.
- B) When the coupon rate is below the market rate.
- C) When the coupon rate is above the market rate.
- D) When the coupon rate is equal to the market rate.

Answer: D

Diff: 1 Type: MC

Skill: Concept

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

10) A \$100,000 5-year 6% bond is issued on January 1, 2017. The bond pays interest annually. The market rate is 7%. What is the discount or premium of the sale of the bonds, rounded to nearest dollar?

- A) \$4,100 discount
- B) \$4,100 premium
- C) \$95,900 discount
- D) \$100,000 premium

Answer: A

Explanation: A)

PV of coupon payments: $6,000 \text{ PVAV}(7\%,5) = 6,000 \times 4.1002 = 24,601$

PV of principal repayment: $100,000 \text{ PV}(7\%,5) = 71,299$

Total bond price = $24,601 + 71,299 = 95,900$

Discount = $100,000 - 95,900 = 4,100$

Diff: 1 Type: MC

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

11) A \$100,000 5-year 6% bond is issued on January 1, 2017. The bond pays interest annually. The market rate is 8%. What is the selling price of the bonds, rounded to nearest dollar?

- A) \$7,986
- B) \$92,014
- C) \$100,000
- D) \$108,425

Answer: B

Explanation: B)

PV of coupon payments: $6,000 \text{ PVAV}(8\%,5) = 6,000 \times 3.99271 = 23,956$

PV of principal repayment: $100,000 \text{ PV}(8\%,5) = 100,000 \times 0.68058 = 68,058$

Total 92,014

Diff: 1 Type: MC

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

12) A \$100,000 5-year 6% bond is issued on January 1, 2017. The bond pays interest annually. The market rate is 8%. What is the selling price of the bonds, rounded to nearest dollar?

- A) \$91,575
- B) \$92,014
- C) \$107,985
- D) \$108,425

Answer: B

Explanation: B)

PV of coupon payments: $6,000 \text{ PVAV}(8\%,5) = 6,000 \times 3.99271 = 23,956$

PV of principal repayment: $100,000 \text{ PV}(8\%,5) = 100,000 \times 0.68058 = 68,058$

Total 92,014

Diff: 2 Type: MC

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

13) A \$100,000 5-year 7% bond is issued on January 1, 2017. The bond pays interest annually. The market rate is 6%. What is the selling price of the bonds, rounded to nearest dollar?

- A) \$4,213
- B) \$95,500
- C) \$100,000
- D) \$104,213

Answer: D

Explanation: D)

PV of coupon payments: $7,000 \text{ PVAV}(6\%,5) = 7,000 \times 4.21236 = 29,487$

PV of principal repayment: $100,000 \text{ PV}(6\%,5) = 100,000 \times 0.74726 = 74,726$

Total = 104,213

Diff: 1 Type: MC

Skill: Concept

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

14) A \$100,000 5-year 7% bond is issued on January 1, 2017. The bond pays interest annually. The market rate is 6%. What is the selling premium or discount on the bonds, rounded to nearest dollar?

- A) \$4,213 discount
- B) \$4,213 premium
- C) \$100,000 discount
- D) \$104,213 premium

Answer: B

Explanation: B)

$$\text{PV of coupon payments: } 7,000 \text{ PVAV}(6\%,5) = 7,000 \times 4.21236 = 29,487$$

$$\text{PV of principal repayment: } 100,000 \text{ PV}(6\%,5) = 100,000 \times 0.74726 = 74,726$$

$$\text{Total} = 104,213$$

$$\text{Premium} = 100,000 - 104,213 = 4,213$$

Diff: 1 Type: MC

Skill: Concept

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

15) A \$100,000 5-year 7% bond is issued on January 1, 2017. The bond pays interest annually. The market rate is 6%. What is the selling premium or discount on the bonds, rounded to nearest dollar?

- A) \$4,213 discount
- B) \$4,213 premium
- C) \$4,100 discount
- D) \$4,100 premium

Answer: B

Explanation: B)

$$\text{PV of coupon payments: } 7,000 \text{ PVAV}(6\%,5) = 7,000 \times 4.21236 = 29,487$$

$$\text{PV of principal repayment: } 100,000 \text{ PV}(6\%,5) = 100,000 \times 0.74726 = 74,726$$

$$\text{Total} = 104,213$$

$$\text{Premium} = 100,000 - 104,213 = 4,213$$

Diff: 2 Type: MC

Skill: Concept

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

16) A \$100,000 5-year 7% bond is issued on January 1, 2017. The bond pays interest annually. The market rate is 8%. What is the selling price of the bonds, rounded to nearest dollar?

- A) \$96,007
- B) \$103,993
- C) \$104,100
- D) \$95,890

Answer: A

Diff: 2 Type: MC

Skill: Concept

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

17) A \$100,000 5-year 7% bond is issued on January 1, 2017. The bond pays interest annually. The market rate is 5%. What is the selling premium or discount on the bonds, rounded to nearest dollar?

- A) \$8,659 premium
- B) \$8,200 premium
- C) \$8,659 discount
- D) \$8,200 discount

Answer: A

Diff: 2 Type: MC

Skill: Concept

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

18) A \$100,000 5-year 5% bond is issued on January 1, 2017. The bond pays interest annually. The market rate is 7%. What is the selling premium or discount on the bonds, rounded to nearest dollar?

- A) \$8,659 premium
- B) \$8,200 premium
- C) \$8,659 discount
- D) \$8,200 discount

Answer: D

Diff: 2 Type: MC

Skill: Concept

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

19) On April 15, 2017, Cando Inc. sold \$10,000,000 of five-year, 3% bonds for \$9,972,469.

From the proceeds, Cando paid its investment bank a \$200,000 sales commission.

Interest is payable semi-annually on April 15 and October 15. What is the effective rate of interest (round to 2 decimal places)?

- A) 1.53%
- B) 1.75 %
- C) 3.00%
- D) 3.50%

Answer: B

Explanation: B) The net proceeds (PV) to Cando are \$9,772,469 ($\$9,972,469 - \$200,000$); $N = 10$ (5×2); $PMT = \$150,000$ ($\$10,000,000 \times 3\% \times 6/12$)

10 N, 9772469 +/- PV, 10000000 FV, 150000 PMT, CPT I/Y I/Y = 1.75%

Diff: 2 Type: MC

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

20) On May 5, 2017, Bennix sold \$1,000,000 of five-year, 3% bonds for \$900,500. From the proceeds, the company paid fees of 100,000. Interest is payable semi-annually on May 5 and November 5. What is the effective rate of interest (round to 2 decimal places)?

- A) 3.00%
- B) 3.72 %
- C) 3.95%
- D) 6.27%

Answer: C

Explanation: C) The net proceeds (PV) to Bennix are \$800,500 (\$900,500 - \$100,000);
N = 10 (5 × 2); PMT = \$15,000

10 N, 800,500 +/- PV, 1000000 FV, 15000 PMT, CPT I/Y I/Y = 3.954% = 3.95%

Diff: 2 Type: MC

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

21) On November 1, 2017, FastCare sold \$5,000,000 of three-year bonds for \$4,750,325. From the proceeds, the company paid accounting fees of 50,000. Interest of 5% is payable annually. What is the effective rate of interest (round to 2 decimal places)?

- A) 7.30%
- B) 5.00%
- C) 4.69%
- D) 3.63%

Answer: A

Explanation: A) The net proceeds (PV) are \$4,700,325 (\$4,750,325 - \$50,000); N = 3 (3 × 1); PMT = \$250,000

3 N, 4,700,325 +/- PV, 5000000 FV, 250000 PMT, CPT I/Y I/Y = 7.296% = 7.30

Diff: 2 Type: MC

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

22) On April 1, 2017, a company sold \$3,500,000 of ten year, 6% bonds for \$2,222,400. From the proceeds, the company paid \$200,000 sales commission. Interest is payable semi-annually on April 1 and October 1. What is the effective rate of interest (round to 2 decimal places)?

- A) 6.25%
- B) 6.98%
- C) 9.81%
- D) 11.46%

Answer: B

Explanation: B) The net proceeds (PV) are \$2,022,400 (\$2,222,400 - \$200,000); N = 20 (10 × 2);
PMT = \$105,000 (\$3,500,000 × 6% × 6/12)

20 N, 2,022,00 +/- PV, 3,500,000 FV, 105,000 PMT, CPT I/Y I/Y = 6.978% = 6.98%

Diff: 2 Type: MC

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

23) Canaroo Inc. sold \$800,000 of two-year bonds for \$701,500 less commissions of \$50,500. Interest is of 5.5% is payable annually. What is the effective rate of interest (round to 2 decimal places)?

- A) 5.50 %
- B) 8.43%
- C) 8.65%
- D) 17.29%

Answer: D

Explanation: D) The net proceeds (PV) are \$651,000 (\$701,500 - \$50,500); N = 2 (1 × 2);
PMT = \$44,000 (\$800,000 × 5.5%)

2 N, 651000 +/- PV, 800000 FV, 44000 PMT, CPT I/Y I/Y = 17.292% = 17.29%

Diff: 2 Type: MC

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

24) Cindy Corp sold \$400,000 of three-year bonds for \$300,500. Interest is of 7.5% is payable annually. What is the effective rate of interest (round to 2 decimal places)?

- A) 19.15%
- B) 14.57%
- C) 13.88%
- D) 7.50%

Answer: A

Explanation: A) The net proceeds (PV) are \$300,500; N = 3 ; PMT = \$30,000 (\$400,000 × 7.5%)

3 N, 300500 +/- PV, 400000 FV, 30000 PMT, CPT I/Y I/Y = 19.152% = 19.15%

Diff: 2 Type: MC

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

25) Ginny Inc. sold \$800,000 of two-year bonds for \$701,500 less commissions of \$50,500. Interest is of 5.5% is payable semi-annually. What is the effective rate of interest (round to 2 decimal places)?

- A) 5.50%
- B) 8.43%
- C) 8.65%
- D) 17.29%

Answer: B

Explanation: B) The net proceeds (PV) are \$651,000 (\$701,500 - \$50,500); N = 4 (2 × 2);
PMT = \$22,000 (\$800,000 × 5.5% × 6/12)

4 N, 651000 +/- PV, 800000 FV, 22000 PMT, CPT I/Y I/Y = 8.427% = 8.43%

Diff: 2 Type: MC

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

26) On June 1, 2017, ABC LTD. provides a vendor with an \$18,500 non-interest-bearing note due on June 1, 2018, in exchange for furniture with a list price of \$18,100. At what amount will the property be recorded in the accounting records? The company's banker has suggested that an appropriate market rate is 12% per annum for loans that mature in one year or less and 15% for loans with longer maturities.

- A) \$16,087
- B) \$16,518
- C) \$18,100
- D) \$18,500

Answer: B

Explanation: B) The fair value of the note is determined using discounted cash flow analysis. The market rate suggested by the bank has been used to discount the obligation. List prices are not necessarily a reliable indicator of the asset's fair market value.

Using a BAII PLUS financial calculator

- 1 N, 12 I/Y, 18500 FV, CPT PV PV = -16,518 (rounded)

Diff: 2 Type: MC

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

27) On May 1, 2017, SBC INC. buys a photocopier listed for \$2,900. The office supply store agrees to accept a \$800 down payment and a \$2,100, three-year note payable at \$798 per year. The company's banker has suggested that an appropriate market rate is 11% per annum for loans that mature in one year or less and 14% for loans with longer maturities. At what amount will the note be recorded at in the accounting records?

- A) \$1,853
- B) \$1,950
- C) \$2,100
- D) \$2,900

Answer: A

Explanation: A) The fair value of the note is determined using discounted cash flow analysis as the interest rate in the note is less than the market rate.

Using a BAII PLUS financial calculator

- 3 N, 14 I/Y, 798 PMT, CPT PV PV = -1,853 (rounded)

Diff: 2 Type: MC

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

28) On May 1, 2017, VeryFine LTD. provides a vendor with a \$18,000 non-interest-bearing note due on May 1, 2018 in exchange for furniture with a list price of \$17,400. At what amount will the property be recorded in the accounting records? The company's banker has suggested that an appropriate market rate is 6% per annum for loans that mature in one year or less and 8% for loans with longer maturities.

- A) \$16,415
- B) \$16,667
- C) \$16,981
- D) \$18,000

Answer: C

Explanation: C) The fair value of the note is determined using discounted cash flow analysis. The market rate suggested by the bank has been used to discount the obligation. List prices are not necessarily a reliable indicator of the asset's fair market value.

Using a BAII PLUS financial calculator

- 1 N, 6 I/Y, 18000 FV, CPT PV PV = -16,981(rounded)

Diff: 2 Type: MC

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

29) On May 1, 2017, SBC INC. buys a photocopier listed for \$2,900. The office supply store agrees to accept a \$800 down payment and a \$2,100, three-year note payable at \$798 per year including interest at 7%. The company's banker has suggested that an appropriate market rate is 11% per annum for loans that mature in one year or less and 14% for loans with longer maturities. At what amount will the photocopier be recorded at in the accounting records?

- A) \$1,950
- B) \$2,100
- C) \$2,900
- D) \$2,653

Answer: D

Explanation: D) The fair value of the note is determined using discounted cash flow analysis as the interest rate in the note is less than the market rate.

Using a BAII PLUS financial calculator

- 3 N, 14 I/Y, 798 PMT, CPT PV PV = -1,853 (rounded)

In accounting records:

Dr. Office equipment (\$1,853 note given + \$800 down payment) = 2,653

Diff: 3 Type: MC

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

30) On June 1, 2017, Bean LTD. provides a vendor with a \$125,500 non-interest-bearing note due on June 1, 2020, in exchange for equipment with a list price of \$118,100. At what amount will the equipment be recorded in the accounting records? The company's banker has suggested that an appropriate market rate is 6% per annum for loans that mature in one year or less and 9% for loans with longer maturities.

- A) \$118,100
- B) \$105,372
- C) \$96,909
- D) \$91,195

Answer: C

Explanation: C) The fair value of the note is determined using discounted cash flow analysis. The market rate suggested by the bank has been used to discount the obligation. List prices are not necessarily a reliable indicator of the asset's fair market value.

Using a BAII PLUS financial calculator

- 3 N, 9 I/Y, 125,500 FV, CPT PV PV = - 96,909 (rounded)

Diff: 2 Type: MC

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

31) On May 1, 2017, SBC INC. buys a computer listed for \$12,600. The office supply store agrees to accept a \$1,600 down payment and a \$11,000, three-year note payable at \$3,500 per year. The company's banker has suggested that an appropriate market rate is 11% per annum for loans that mature in one year or less and 14% for loans with longer maturities. At what amount will the note be recorded at in the accounting records?

- A) \$1,800
- B) \$8,126
- C) \$8,553
- D) \$11,000

Answer: B

Explanation: B) The fair value of the note is determined using discounted cash flow analysis as the interest rate in the note is less than the market rate.

Using a BAII PLUS financial calculator

- 3 N, 14 I/Y, 3500 PMT, CPT PV PV = -8,126 (rounded)

Diff: 2 Type: MC

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

32) Explain 3 instances when the fair value of the non-current liability will not equal the cash proceeds.

Answer: Some common departures include receiving non-cash assets, bonds issued at premium or discount, issuance of hybrid financial instruments, and debt issuance dates that differ from the interest payment dates.

Diff: 2 Type: SA

Skill: Concept

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

33) Cartwright Corporation had a \$1,350,000, 5% bond available for issue on September 1, 2017. Interest is to be paid quarterly beginning November 30th. All of the bonds were issued at par on October 1st. Prepare the journal entries for October 1st and November 30th.

Answer:

Oct. 1	Cash	1,355,625	
	Interest Payable		5,625
	Bonds Payable		1,350,000
	Issued bonds; $\$1,350,000 \times 5\% \times 1/12 = \$5,625$.		
Nov. 30	Interest Payable	5,625	
	Bond Interest Expense	11,250	
	Cash		16,875
	Paid interest on bonds; $\$1,350,000 \times 5\% \times 2/12 = \$11,250$.		

Diff: 2 Type: SA

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

34) Explain how non-current liabilities are measured after initial recognition.

Answer: After initial recognition, all financial liabilities excepting those held for trading are measured and reported at **amortized cost**, which is the amount initially recognized for the debt adjusted by subsequent amortization of premium or discount.

There are two essential steps that must be taken to determine the amortized cost of a financial liability:

1. establish the effective interest rate; and
2. amortize the premium or discount using the effective interest method.

Diff: 2 Type: ES

Skill: Concept

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

35) On May 1, 2017, Sea Escape Ltd. purchases a new automobile for \$18,000 from the dealer who provides the financing. The three-year, interest-free loan is repayable at \$500 per month. The market rate of interest for similar transactions is 0.25% per month.

Required:

Prepare journal entries to record:

- a. the purchase of the automobile.
- b. the accrual of interest and the loan payment at the end of May 2017.

Answer:

- a. The fair value of the note is determined using discounted cash flow analysis.

- $PVFA(0.25\%, 36) = (1/0.0025) \times (1-(1/0.0025)^{36})$
- $PV \text{ of the note} = \$500 \times PVFA(0.25\%, 36)$

Dr. Automobile	17,193	
Cr. Notes payable		17,193

b. Dr. Interest expense [$\$17,193 \times 0.250\% = \text{(rounded)}$]	43	
Cr. Notes payable*		43
Dr. Notes payable*	500	
Cr. Cash		500

*May be combined

Diff: 2 Type: ES

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

36) Cynthia Dixie Accounting Inc. takes advantage of a well-known office furnishings store's low-interest-rate financing. Cynthia buys furniture on the first day of its fiscal year, signing a \$19,000, five-year note. The note is payable in full at maturity. Interest is payable annually at 2%. The market rate of interest for similar transactions is 5%.

Required:

Prepare journal entries to record:

- a. The purchase of the office furniture.
- b. The payment of interest and related amortization of the discount at the end of year 1.

Answer:

- a. The fair value of the note is determined using discounted cash flow analysis.

Value of principal	= \$19,000 / 1.05 ⁵	=	14,887
Value of coupons	= \$380 × PVFA(5%,5)	=	<u>1,645</u>
Total			16,532

Dr. Office furniture	16,532	
Cr. Notes payable		16,532

- b. Dr. Interest expense [\$16,532 × 5% = (rounded)] 827
- Cr. Cash 380
- Cr. Notes payable 447

Diff: 2 Type: ES

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

37) Stay Fit for Life Inc. issues three series of \$10,000,000 ten-year bonds dated January 1, 2017 on the issue date. Interest is payable on June 30 and December 31 each year. Series A has a coupon rate of 7%; series B is 8%; and series C is 11%. The market rate of interest at time of issue is 8%.

Required:

- a. Prior to making any numerical calculations, comment on whether:
- Series A will sell at a discount, par, or premium and briefly explain why.
 - Series B will sell at a discount, par, or premium and briefly explain why.
 - Series C will sell at a discount, par, or premium and briefly explain why.

b. Prepare journal entries to record the issuance of:

- The series A bonds.
- The series B bonds.
- The series C bonds.

Answer:

- a(i). Series A will sell at a discount as the coupon rate is less than the market rate of interest
a(ii). Series B will sell at par as the coupon rate equals the market rate of interest
a(iii). Series C will sell at a premium as the coupon rate exceeds the market rate of interest

b. All series: the principal amount = \$10,000,000; the number of payments = $10 \times 2 = 20$; and the market rate of interest = $8\%/2 = 4\%$

b(i).

Coupon interest payment = $\$10,000,000 \times (7\%/2) = \$350,000$

- PV of coupons = $\$350,000 \times PVFA(4\%, 20) =$
- PV of principal = $\$10,000,000/1.04^{20}$
- PV of the note = 9,320,483

Using a BAII PLUS financial calculator:

- 20N, 4 I/Y, 350,000 PMT, 10,000,000 FV, CPT PV

Journal entry on issue date—Series A

Dr. Cash	9,320,483	
	Cr. Bonds payable	9,320,483

b(ii).

Using a BAII PLUS financial calculator:

- 20N, 4 I/Y, 400,000 PMT; 10,000,000 FV, CPT PV PV = -10,000,000

Journal entry on issue date—Series B

Dr. Cash	10,000,000	
	Cr. Bonds payable	10,000,000

b(iii).

Using a BAII PLUS financial calculator:

- 20N, 4 I/Y, 550,000 PMT; 10,000,000 FV, CPT PV PV = - 12,038,548 (rounded)

Journal entry on issue date—Series C

Dr. Cash	12,038,548	
	Cr. Bonds payable	12,038,548

Diff: 2 Type: ES

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

38) Over the River Co. (OTRC) sells \$1,200,000 of 6-year, 10% bonds at par plus accrued interest. The bonds are dated January 1, 2017 but due to market conditions are not issued until May 1, 2017. Interest is payable on June 30 and December 31 each year. The market rate of interest at time of issue is the same as the stated rate.

Required:

Prepare journal entries to record:

- The issuance of the bonds on May 1, 2017. Assume that OTRC has adopted a policy of crediting accrued interest payable for the accrued interest on the date of sale.
- Payment of interest on June 30, 2017.
- Payment of interest on December 31, 2017.

Answer:

a. Journal entry on issuance (May 1, 2017)

Dr. Cash (\$1,200,000 + \$40,000)	1,240,000	
Cr. Bonds payable		1,200,000
Cr. Accrued interest payable ($\$1,200,000 \times 10\% \times 4/12$)		40,000

b. Journal entry on interest payment date (June 30, 2017)

Dr. Accrued interest payable	40,000	
Dr. Interest expense ($\$1,200,000 \times 10\% \times 2/12$)	20,000	
Cr. Cash		60,000

c. Journal entry on interest payment date (Dec. 31, 2017)

Dr. Interest expense ($\$1,200,000 \times 10\%/2$)	60,000	
Cr. Cash		60,000

Diff: 2 Type: ES

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

39) Blue Sky Travel Inc. issues \$2,000,000 of ten-year, 8% bonds dated January 1, 2017. Interest is payable on January 1 and July 1 each year. The proceeds realized from the issue were the \$1,821,367 sales price less the \$20,000 fee charged by Blue Sky's investment bank. Blue Sky's year-end is December 31.

Required:

Prepare journal entries:

- a. The issuance of the bonds.
- b. Payment of interest and related amortization on July 1, 2017.
- c. Accrual of interest and related amortization on December 31, 2017.

Answer:

Determining the effective interest rate for the period using a BAII PLUS financial calculator

- The net proceeds (PV) to Blue Sky are \$1,801,367 (\$1,821,367 - \$20,000); N = 20 (10 × 2); PMT = \$80,000 (\$2,000,000 × 8% × 6/12)
- 20 N, 1,801,367 +/- PV, 2000000 FV, 80000 PMT, CPT I/Y I/Y = 4.7823% (rounded)

a. Journal entry on issuance (Jan. 1, 2017)

Dr. Cash (Sales proceeds - transaction costs)	1,801,367	
Cr. Bonds payable		1,801,367

b. Journal entry on interest payment date (July 1, 2017)

Dr. Interest expense (\$1,801,367 × 4.7823%)	86,147	
Cr. Cash		80,000
Cr. Bonds payable		6,147

c. Journal entry at year-end (Dec. 31, 2017)

Dr. Interest expense (\$1,801,367 + 6,147) × 4.7823%	86,441	
Cr. Interest payable		80,000
Cr. Bonds payable		6,441

Diff: 2 Type: ES

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

40) Canadian Sea Rides Ltd. issues \$8,000,000 of four-year, 4% bonds dated January 1, 2017. Interest is payable on January 1 and July 1 each year. The proceeds realized from the issue were the \$8,529,082 sales price less the \$50,000 fee charged by Sea's lawyers. Sea's year-end is December 31.

Required:

Prepare entries for

- a. The issuance of the bonds.
- b. Payment of interest and related amortization on July 1, 2015.
- c. Accrual of interest and related amortization on December 31, 2015.

Answer:

Determining the effective interest rate for the period using a BAII PLUS financial calculator

- The net proceeds (PV) to Blue Sky are \$8,479,082 (\$8,529,082 - \$50,000); N = 8 (4 × 2); PMT = \$160,000 (\$8,000,000 × 8% × 6/12)
- 8 N, 8,479,082 +/- PV, 8000000 FV, 160000 PMT, CPT I/Y I/Y = 1.2101 % (rounded)

a. Journal entry on issuance (Jan. 1, 2017)

Dr. Cash (Sales proceeds - transaction costs)	8,479,082	
Cr. Bonds payable		8,479,082

b. Journal entry on interest payment date (July 1, 2017)

Dr. Interest expense (\$8,479,082 × 1.2101%)	102,605	
Dr. Bonds payable	57,395	
Cr. Cash		160,000

c. Journal entry at year-end (Dec. 31, 2017)

Dr. Interest expense (\$8,479,082 - 57,395) × 1.2101%	101,911	
Dr. Bond payable	58,089	
Cr. Interest payable		160,000

Diff: 2 Type: ES

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

41) Compare and contrast the two methods for amortizing the discount/premium.

Interest expense in the first period is higher under which method for bonds sold at a discount? For bonds sold at a premium?

Why does IFRS require public companies to use the effective interest method?

Why do the Accounting Standards for Private Enterprises allow companies to use the straight-line method?

Answer: The straight-line and effective interest methods are different approaches of allocating discounts and premiums to interest expense over the life of the bonds. The choice of methods does not affect a company's cash flow, as the coupon payment (the cash outflow) remains the same. Moreover, total interest expense over the life of the bond is the same.

Initial interest expense will be higher under the straight-line method for bonds issued at a discount and lower for bonds issued at a premium.

IFRS believes that the effective interest method is conceptually superior as a uniform interest rate is used to calculate interest expense over the life of the bond. It thus provides for better matching of expenses than does the straight-line method.

The Accounting Standards for Private Enterprises permits the use of the straight-line method as it is easy to use and period results do not usually differ materially from those obtained under the effective interest method.

Diff: 2 Type: ES

Skill: Concept

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

42) Really Amazing Vacations Ltd. issues \$1,000,000 of ten-year, 10% bonds dated January 1, 2017. Interest is payable on January 1 and July 1 each year. The proceeds realized from the issue were the \$1,048,801 sales price less the \$80,000 fee charged by Really Amazing's investment bank. Really Amazing's year-end is December 31.

Required:

Prepare journal entries:

- a. The issuance of the bonds.
- b. Payment of interest and related amortization on July 1, 2017.
- c. Accrual of interest and related amortization on December 31, 2017.

Answer:

Determining the effective interest rate for the period using a BAII PLUS financial calculator

- The net proceeds (PV) to Really Amazing are \$968,801 (\$1,048,801 - \$80,000); N = 20 (10 × 2); PMT = \$50,000 ($\$1,000,000 \times 10\% \times 6/12$)
- 20 N, 968,801 +/- PV, 1000000 FV, 50000 PMT, CPT I/Y I/Y = 5.2558% (rounded)

a. Journal entry on issuance (Jan. 1, 2017)

Dr. Cash (Sales proceeds - transaction costs)	968,801	
Cr. Bonds payable		968,801

b. Journal entry on interest payment date (July 1, 2017)

Dr. Interest expense ($\$968,801 \times 5.2558\%$)	50,918	
Cr. Cash		50,000
Cr. Bonds payable		918

c. Journal entry at year-end (Dec. 31, 2017)

Dr. Interest expense ($\$968,801 + 918 \times 5.2558\%$)	50,966	
Cr. Interest payable		50,000
Cr. Bonds payable		966

Diff: 2 Type: ES

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

43) Bold Accountants Co. sells \$6,000,000 of 10-year, 6% bonds priced to yield 5.5%. The bonds are dated and issued on January 1, 2017. Interest is payable on January 1 and July 1 each year. Bold's year-end is June 30.

Required:

Prepare entries for

- a. The issuance of the bonds.
- b. Accrual of interest and related amortization on June 30, 2017.
- c. Payment of interest on July 1, 2017.
- d. Payment of interest and related amortization on January 1, 2018.

Answer:

Determining the effective interest rate for the period using a BAII PLUS financial calculator

- $5.5\%/2 = 2.75\%$
- 20N, 2.75I/Y, 6,000,000 FV, 180000 PMT, CPT PV PV = - 6,228,408 (rounded)

a. Journal entry on issuance (Jan. 1, 2017)

Dr. Cash (Sales proceeds)	6,228,408	
Cr. Bonds payable		6,228,408

b. Journal entry at year-end (June 30, 2017)

Dr. Interest expense	171,281	
Dr. Bonds payable	8,719	
Cr. Interest payable		180,000

c. Journal entry on interest payment date (July 1, 2017)

Dr. Interest payable	180,000	
Cr. Cash		180,000

d. Journal entry on interest payment date (Jan. 1, 2018)

Dr. Interest expense	171,041	
Dr. Bonds payable	8,959	
Cr. Cash		180,000

Diff: 2 Type: ES

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

44) Flint Corporation issues a \$2,000, five-year, 6% bond, dated January 1, 2017, that pays interest on June 30 and December 31 and is sold at par on March 1, 2017. Provide the journal entry on March 1, 2017, and June 30, 2017.

Answer:

March 1, 2017		
Dr. Cash	2,020	
Cr. Bonds payable		2,000
Cr. Accrued interest on bond payable		20
On date of first interest payment		
Dr. Accrued interest on bond payable	20	
Dr. Interest expense	40	
Cr. Cash		60

Diff: 2 Type: ES

Skill: Comp

Objective: 12.3 Describe the initial and subsequent measurement of non-current financial liabilities and account for these obligations.

12.4 Learning Objective 4

1) Which statement is correct about the derecognition of a matured obligation?

- A) There will be a gain on retirement.
- B) There will be a loss on retirement.
- C) There will be no gain or loss on retirement.
- D) There could be either a gain or loss on retirement.

Answer: C

Diff: 2 Type: MC

Skill: Concept

Objective: 12.4 Apply accrual accounting to the derecognition of financial liabilities.

2) Which statement is correct about the derecognition of an obligation before maturity?

- A) There will be a gain on retirement.
- B) There will be a loss on retirement.
- C) There will be no gain or loss on retirement.
- D) There could be either a gain or loss on retirement.

Answer: D

Diff: 2 Type: MC

Skill: Concept

Objective: 12.4 Apply accrual accounting to the derecognition of financial liabilities.

3) Which statement is correct about offsetting?

- A) It deteriorates key financial ratios.
- B) It shows the net amount of related assets and liabilities.
- C) It shows the related assets and liabilities as contra accounts.
- D) It makes it easier for borrowers to fulfill covenants.

Answer: B

Diff: 2 Type: MC

Skill: Concept

Objective: 12.4 Apply accrual accounting to the derecognition of financial liabilities.

4) Which statement is correct about offsetting?

- A) Offsetting generally provides decision-useful information for financial statement users.
- B) Offsetting aids in financial statement user's ability to correctly interpret financial results.
- C) Offsetting is generally prohibited under IFRS, unless it is specifically required.
- D) Offsetting is required under IFRS when there is a legally enforceable right of offset.

Answer: C

Diff: 2 Type: MC

Skill: Concept

Objective: 12.4 Apply accrual accounting to the derecognition of financial liabilities.

5) Which statement is correct about offsetting?

- A) Offsetting is required under IFRS when the entity is willing and legally able to offset.
- B) Offsetting is required under IFRS when the company intends to settle on a net basis.
- C) Offsetting is generally permitted under IFRS, unless it is specifically prohibited.
- D) Offsetting is required under IFRS when there is a legally enforceable right of offset.

Answer: A

Diff: 2 Type: MC

Skill: Concept

Objective: 12.4 Apply accrual accounting to the derecognition of financial liabilities.

6) Describe the three steps for derecognition of a financial liability prior to maturity.

Answer:

Derecognition of a financial liability prior to maturity should follow these steps:

1. The company updates its records to account for interim interest expense, including the amortization of discounts or premiums up to the derecognition date.
2. The entity records the outflow of assets expended to extinguish the obligation.
3. The entity records a gain or loss on debt retirement equal to the difference between the amount paid and the book value of the liability derecognized.

Diff: 2 Type: SA

Skill: Concept

Objective: 12.4 Apply accrual accounting to the derecognition of financial liabilities.

7) Raysport Inc. sells \$1,000,000 of three-year bonds on January 1, 2017, for \$980,000. The coupon rate on the bonds is 6% payable on July 1 and January 1. Transaction costs directly attributable to issuing the bonds total \$20,000. Raysport Inc's fiscal year-end is December 31. The effective semi-annual rate is 3.6510%. On October 1, 2018, Raysport Inc. repurchases the bonds on the open market for total consideration of \$980,000 cash. Raysport uses the effective interest method.

Required: Record the journal entries for derecognition at October 1, 2018.

Answer: a) Journal entry when bonds are sold on January 1, 2017

Dr. Cash	\$980,000	
Cr. Cash	Transaction costs	\$20,000
Cr Bonds payable		\$960,000

Journal entry to update Raysport's records to October 1, 2018:

Dr. Interest expense	\$17,812	
Cr. Interest payable		\$15,000
Cr. Bonds payable		\$2,812

Journal entry to record repurchase:

Dr. Interest payable	\$15,000	
Dr. Bonds Payable	\$978,521	
Cr. Cash		\$980,000
Cr. Gain on bond redemption		\$13,521

Explanation: Notes:

Date	Interest Expense A	Interest Paid B	Interest Amortized C	Amortized Cost D
January 1, 2017				\$960,000 (d)
July 1, 2017	35,049 (a)	30,000 (b)	5,049 (c)	965,049 (e)
January 1, 2018	35,235	30,000	5,235	970,284
July 1, 2018	35,425	30,000	5,425	975,709
October 1, 2018	17,812	15,000	2,812	978,521
TOTAL	123,521	105,000	18,521	

(a) $\$960,000 \times 3.6510\% = \$35,049$

(b) $\$1,000,000 \times 6\% \times 1/2 = \$30,000$

(c) Column A - Column B = Column C

(e) $960,000 (d) + 5,049 (c) = \$965,049 (e)$

Diff: 2 Type: SA

Skill: Comp

Objective: 12.4 Apply accrual accounting to the derecognition of financial liabilities.

8) When should an entity offset a financial asset and a financial liability?

Answer: According to IAS 32:

A financial asset and a financial liability shall be offset and the net amount presented in the statement of financial position when, and only when, an entity:

- (a) currently has a legally enforceable right to set off the recognized amounts; and
- (b) intends either to settle on a net basis, or to realize the asset and settle the liability simultaneously.

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Diff: 2 Type: SA

Skill: Concept

Objective: 12.4 Apply accrual accounting to the derecognition of financial liabilities.

9) Offsetting is the practice of showing the net amount of related assets and liabilities on the balance sheet, rather than showing each of the components separately. State and explain the pros and cons of offsetting assets against liabilities.

Answer:

PROS	CONS
1. Offsetting usually improves key ratios making it easier to meet lenders' restrictive covenants.	1. IFRS asserts that separately reporting assets and liabilities generally conveys more information than reporting the net amount, and that offsetting compromises the user's ability to correctly interpret the financial results.
2. Offsetting may free up borrowing capacity as loan agreements typically limit the maximum debt a company can borrow.	2. IAS 1 paragraph 32 prohibits offsetting generally, unless specifically allowed by another standard. One exception is the requirement per IAS 32 paragraph 42.

Diff: 2 Type: SA

Skill: Concept

Objective: 12.4 Apply accrual accounting to the derecognition of financial liabilities.

10) On January 1, 2014, Snuggly Bunny Ltd. issued \$3,000,000 of 4%, fifteen-year bonds priced to yield 5%. Interest is payable on June 30 and December 31. Snuggly repurchases the outstanding bonds on July 1, 2016, at which time the market rate of interest is 3.5%. Prepare the journal entries for these transactions. Answer: The fair value of the bond at time of issue is determined using discounted cash flow analysis. The fair market value of the bond at the time of repurchase is determined using discounted cash flow analysis using the current effective rate of interest ($5\%/2 = 2.5\%$) to discount the remaining cash flow stream. As at date of redemption, there are 12 1/2 years (25 periods) left to maturity. The book value of the bond at the time of repurchase is determined using discounted cash flow analysis using the original effective rate of interest to discount the remaining cash flow stream. As at date of redemption, there are 12 1/2 years left to maturity.

Using a BAII PLUS financial calculator (issue)
30 N (15 × 2), 2.5 I/Y , 60,000 PMT, 3,000,000 FV, CPT PVPV = -2,686,046 (rounded)

Issue		
Dr. Cash	2,686,046	
Cr. Bonds payable		2,686,046

Using a BAII PLUS financial calculator (redemption)
market value: 25 N ,1.75 I/Y (3.5/2), 60,000 PMT, 3,000,000 FV, CPT PV PV = -3,150,816 (rounded)
book value: 25 N, 2.5 I/Y , 60,000 PMT, 3,000,000 FV, CPT PVPV = -2,723,635 (rounded)

Repurchase		
Dr. Bonds payable (book value)	2,723,635	
Dr. Loss on repurchase of bonds	427,181	
Cr. Cash (market value)		3,150,816

Diff: 2 Type: SA

Skill: Comp

Objective: 12.4 Apply accrual accounting to the derecognition of financial liabilities.

11) Explain what an "in-substance defeasance" is and whether this arrangement results in the derecognition of a financial liability.

Answer: **In-substance defeasance** is an arrangement where funds sufficient to satisfy a liability are placed in trust with a third party to pay the creditors directly.

The borrower cannot usually derecognize the obligation through in-substance defeasance, which is a unilateral arrangement put in place by the debtor. The defeasance would result in derecognition of the liability only if the creditor also formally confirms that the entity is no longer liable for the indebtedness.

Diff: 2 Type: ES

Skill: Concept

Objective: 12.4 Apply accrual accounting to the derecognition of financial liabilities.

12) Missouri Wheels Ltd. (MW) sold \$9,000,000 of fourteen-year, 3% bonds at par on January 1, 2017. Interest is payable on June 30 and December 31 each year. The bonds can be called at any time at 103 plus accrued interest. On April 1, 2018, MW bought back \$3,500,000 of bonds on the open market for \$2,600,000 including accrued interest and retired them. On August 1, 2019, MW called \$4,500,000 of bonds and retired them. MW prepares accrual entries only at year-end.

Required:

Prepare journal entries to record:

- a. The open market purchase of the bonds on April 1, 2018.
- b. The calling of the bonds on August 1, 2019.
- c. Retirement of the remaining bonds on December 31, 2030, assuming that the final interest payment has already been recorded in the company's books.

Answer:

a. Journal entry for open market purchase and retirement (Apr. 1, 2018)

Dr. Bonds payable	3,500,000	
Dr. Interest expense ($\$9,000,000 \times 3\% \times 3/12$) $\times 3,500/9,000$	26,250	
Cr. Cash		2,600,000
Cr. Gain on bond redemption		926,250

b. Journal entry for calling the bonds (Aug. 1, 2019)

Dr. Bonds payable	4,500,000	
Dr. Interest expense ($\$4,500,000 \times 3\% \times 1/12$)	11,250	
Dr. Loss on bond redemption	135,000	
Cr. Cash ($\$4,500,000 \times 103\% + \$11,250$)		4,646,250

c. Journal entry on retirement of the bonds (Dec. 31, 2030)

Dr. Bonds payable ($\$9,000,000 - \$3,500,000 - \$4,500,000$)	1,000,000	
Cr. Cash		1,000,000

Diff: 1 Type: ES

Skill: Comp

Objective: 12.4 Apply accrual accounting to the derecognition of financial liabilities.

13) Arlington Corp issued \$7,000,000, 5% 6-year bonds on January 1, 2014 at par. Interest is due annually on December 31. The market rate of interest has since increased dramatically to 9%. As such, Arlington can repurchase its bonds on the open market for \$6,507,449. They decided to take advantage of this situation, and on January 1, 2018 issued a new series of bonds in the amount of \$6,507,449 [two-year bonds, 9% interest payable annually]. The bonds were sold at par and the proceeds were used to retire the 5% bonds.

Entry for sale of new bonds

Dr. Cash	6,507,449	
Cr. Bonds payable		6,507,449

Arlington has recorded a gain on the retirement which increases its net income for the year. Ignoring transaction costs and taxation effects, is Arlington any better off? Discuss.

Answer: There are a number of ways to approach this question, but NPV (net present value) analysis is normally used. The company's cash position has not changed—they raised \$6,507,449 using this money to pay out the old bond issue.

The present value of the old bond issue is determined by the repurchase price - \$6,507,449. This is confirmed by using a BAI PLUS financial calculator.

The present value of the new bond issue is determined by the issue price - \$6,507,449. This is confirmed by using a BAI PLUS financial calculator.

The net cash inflow was \$0, as 100% of the sale proceeds of the new issue were used to retire the old issue. This coupled with the fact that the present value of the old and new indebtedness is the same means that the company is not any better off than previously. When taxation and transaction costs are considered, the company will be worse off.

Diff: 2 Type: ES

Skill: Comp

Objective: 12.4 Apply accrual accounting to the derecognition of financial liabilities.

14) Legally Yours, a law firm, sells \$8,000,000 of four-year, 8% bonds priced to yield 6.6%. The bonds are dated January 1, 2018, but due to some regulatory hurdles are not issued until March 1, 2018. Interest is payable on January 1 and July 1 each year. The bonds sell for **\$8,388,175** plus accrued interest.

In mid-June, Legally Yours earns an unusually large fee of \$11,000,000 for one of its cases. They use part of the proceeds to buy back the bonds in the open market on July 1, 2018 after the interest payment has been made. Legally Yours pays a total of \$8,456,234 to reacquire the bonds and retires them.

Required:

Prepare journal entries to record:

- a. The issuance of the bonds—assume that Legally Yours has adopted a policy of crediting interest expense for the accrued interest on the date of sale.
- b. Payment of interest and related amortization on July 1, 2018.
- c. Reacquisition and retirement of the bonds.

Answer:

a. Journal entry on issuance (March 1, 2018)

Dr. Cash	8,494,842	
Cr. Bonds payable (given)		8,388,175
Cr. Interest expense ($\$8,000,000 \times 8\% \times 2/12$)		106,667

b. Journal entry on interest payment date (July 1, 2018)

Dr. Interest expense ($\$184,540^* + \$106,667$)	291,207	
Dr. Bonds payable	28,793	
Cr. Cash		320,000

* $[\$8,388,175 \times (6.6\%/2) \times (4/6) = \$184,540$ (rounded)]

c. Journal entry on reacquisition of the bonds (July 1, 2018)

Dr. Loss on bond redemption		
($\$8,456,234 - (\$8,388,175 - 28,793)$)	96,852	
Dr. Bonds payable	8,359,382	
Cr. Cash		8,456,234

Diff: 2 Type: ES

Skill: Comp

Objective: 12.4 Apply accrual accounting to the derecognition of financial liabilities.

15) Fredericton Aerospace Inc. raised \$5,369,210 by selling \$5,000,000 of six-year, 12% bonds dated January 1, 2013. Fredericton used part of the proceeds to pay its investment bank's fee of \$100,000 and related legal and accounting fees of \$600,000.

Interest is payable on June 30 and December 31 each year. Fredericton can call the bonds on January 1, 2016 at 103. The company exercises this privilege, redeeming 40% of the bonds on the call date and retiring them. The company year ends on December 31.

Required:

Prepare journal entries to record:

- a. The issuance of the bonds on January 1, 2013.
- b. Before completing the entries for parts (b) and (c), prepare the amortization table for the bonds through to December 31, 2015. Prepare entry for the payment of interest and related amortization on December 31, 2015.
- c. Repurchase of the bonds on January 1, 2016.

Answer: Determining the effective interest rate for the period using a BAII PLUS financial calculator 6.8252% (rounded)

Effective period rate 6.8252%
Small differences due to rounding

Date	Interest Expense	Interest Paid	Discount Amortized	Amortized Cost
Jan. 1, 2013				\$4,669,210 (a)
June 30, 2013	\$318,683	\$300,000	\$18,683	\$4,687,893
Dec. 31, 2013	\$319,958	\$300,000	\$19,958	\$4,707,851
June 30, 2014	\$321,320	\$300,000	\$21,320	\$4,729,171
Dec. 31, 2014	\$322,775	\$300,000	\$22,775	\$4,751,947
June 30, 2015	\$324,330	\$300,000	\$24,330	\$4,776,276
Dec. 31, 2015	\$325,990	\$300,000	\$25,990	\$4,802,267
Jan. 1, 2016 (b)				-\$1,920,907
				\$2,881,360

- (a) The net sale proceeds of the bonds
- (b) Redeem and derecognize 40% of the outstanding bonds

a. Journal entry on issuance (Jan. 1, 2013)

Dr. Cash (Sales proceeds - transaction costs) (5,369,210 - 700,000)	4,669,210	
Cr. Bonds payable		4,669,210

b. Journal entry on interest payment date (Dec. 31, 2015)

Dr. Interest expense (from spreadsheet)	325,990	
Cr. Cash		300,000
Cr. Bonds payable		25,990

c. Journal entry on reacquisition of the bonds (Jan. 1, 2016)

Dr. Loss on bond redemption	139,093	
Dr. Bonds payable (from spreadsheet)	1,920,907	
Cr. Cash (\$2,000,000 × 103%)		2,060,000

Diff: 3 Type: ES

Skill: Comp

Objective: 12.4 Apply accrual accounting to the derecognition of financial liabilities.

16) Toebee Corporation issued bonds with a par value of \$500,000 and a five-year life on May 1, 2015. The contract rate is 7%. The bonds pay interest on October 31 and April 30. They were issued at a price of \$489,734 when the market rate was 7.5%. Toebee Corporation's year end is December 31.

Required:

- 1) Prepare an amortization table using the effective interest method.
- 2) Prepare an amortization table using the straight-line method
- 3) Contrast the two methods, commenting on the following:
 - a. Period interest expense
 - b. Total interest expense
 - c. Discount amortized at maturity
 - d. Amortized cost at maturity

Answer: 1. and 2.

	Cash interest paid	Period interest expense	Discount amortization	Unamortized Discount	Carrying Value
May 1/15				10,266	489,734
Oct 31/15	17,500	18,365 ¹	865	9,401	490,599
Apr 30/16	17,500	18,397 ²	897	8,504	491,496
Oct 31/16	17,500	18,431 ³	931	7,573	492,427
Apr 30/17	17,500	18,466 ⁴	966	6,607	493,393
Oct 31/17	17,500	18,502 ⁵	1,002	5,605	494,395
Apr 30/18	17,500	18,540 ⁶	1,040	4,565	495,435
Oct 31/18	17,500	18,579 ⁷	1,079	3,486	496,514
Apr 30/19	17,500	18,619 ⁸	1,119	2,367	497,633
Oct 31/19	17,500	18,661 ⁹	1,161	1,206	498,794

3.

- a) When using the effective interest method, period begins smaller and increases in this example with a bond discount. Whereas interest expense remains constant each period when using the straight-line method.
- b) Total interest expense is the same under both methods
- c) The total amount of the discount amortized over the life of the bond is the same under both methods
- d) Under both methods the carrying value at maturity is the face value of the bond.

Diff: 3 Type: ES

Skill: Concept

Objective: 12.4 Apply accrual accounting to the derecognition of financial liabilities.

17) There are three independent situations summarized below. In all three cases the bonds are sold on January 1, 2016 and the issuing company has a December 31 year-end. In situation three, the bonds were all repurchased at par on January 1, 2020.

	<u>Situation 1</u>	<u>Situation 2</u>	<u>Situation 3</u>
Face value	30,000,000	15,000,000	30,000,000
Coupon rate	12%	12%	12%
Coupon dates	6/30; 12/31	12/31	12/31
Market rate	10%	14%	15%
Time to maturity	7 years	11 years	6 years

Required:

Prepare journal entries to record:

- The issuance of the three bonds.
- Payment of interest and related amortization on December 31, 2016. Prepare the amortization table to help you.
- Retirement of the situation 3 bond on January 1, 2020.

Answer: Using a BAII PLUS financial calculator:

Situation 1 PV = -32,969,593 (rounded)

Situation 2 PV = -13,364,180 (rounded)

Situation 3 PV = -26,593,966 (rounded)

Amortization tables

Situation 1

Small differences due to rounding

Date	Interest expense	Interest paid	Discount amortized	Amortized cost
Jan. 1, 2016				32,969,593
June 30, 2016	1,648,480	\$1,800,000	\$151,520	32,818,073
Dec. 31, 2016	1,640,904	1,800,000	159,096	32,658,977

Situation 2

Small differences due to rounding

Date	Interest expense	Interest paid	Discount amortized	Amortized cost
Jan. 1, 2016				13,364,180
Dec. 31, 2016	1,870,985	1,800,000	70,985	13,435,165

Situation 3

Small differences due to rounding

Date	Interest expense	Interest paid	Discount amortized	Amortized cost
Jan. 1, 2016				26,593,966
Dec. 31, 2016	3,989,095	3,600,000	389,095	26,983,061

a. Journal entry on issuance (Jan. 1, 2016)

Situation 1	Dr. Cash (Sales proceeds)	32,969,593	
	Cr. Bonds payable		32,969,593
Situation 2	Dr. Cash (Sales proceeds)	13,364,180	
	Cr. Bonds payable		13,364,180
Situation 3	Dr. Cash (Sales proceeds)	26,593,966	
	Cr. Bonds payable		26,593,966

b. Journal entry at year-end (Dec. 31, 2016)

Situation 1	Dr. Interest expense	1,640,905	
	Dr. Bonds payable	159,096	
	Cr. Cash		1,800,000
Situation 2	Dr. Interest expense	1,870,985	
	Cr. Bonds payable		70,985
	Cr. Cash		1,800,000
Situation 3	Dr. Interest expense	3,989,095	
	Cr. Bonds payable		389,095
	Cr. Cash		3,600,000

c. Journal entry on retirement (Jan. 1, 2020)

Situation 3	Dr. Bonds payable*	28,536,862	
	Dr. Loss on retirement	1,463,138	
	Cr. Cash		30,000,000

*Calculate the outstanding balance at the beginning of period 5: 4N, 15I/Y, 30000000 FV, 3600000 PMT, CPT PV PV = -28,536,862 (rounded)

Diff: 2 Type: ES

Skill: Comp

Objective: 12.4 Apply accrual accounting to the derecognition of financial liabilities.

18) On July 1, 2014, Club Country Golf Corp. issued \$20,000,000 of five-year, 12%, semi-annual bonds for \$20,075,000. At time of issue, Club Country paid its investment bank a \$75,000 sales commission. On July 31, 2017, Club Country calls \$12,000,000 of the bonds, paying 104 plus accrued interest, and retires them. On March 31, 2018, Club Country purchases the remaining bonds on the open market for \$8,180,000 including accrued interest and retires them. Club Country's year-end is August 31. The company does not use reversing entries.

Required:

a. Prepare journal entries to record:

- i. The issuance of the bonds on July 1, 2014.
- ii. Repurchase of the bonds on July 31, 2017.
- iii. Payment of interest on December 31, 2017.
- iv. Retirement of the remaining bonds on March 31, 2018.

b. Provide a brief explanation as to the most likely reasons that Club Country was able to repurchase its bonds at a discount.

Answer: a.

(i). Journal entry on issuance (July 1, 2014)

Dr. Cash (Sales proceeds)	20,075,000	
Cr. Bonds payable		20,000,000
Cr. Cash (Sales commission)		75,000

(ii). Journal entry on reacquisition of the bonds (July 31, 2017)

Dr. Interest expense ($\$12,000,000 \times 12\% \times 1/12$)	120,000	
Dr. Bonds payable		12,000,000
Dr. Loss on redemption of bonds ($\$12,600,000 - \$12,000,000 - \$120,000$)	480,000	
Cr. Cash ($\$12,000,000 \times 104\% + \$120,000$)		12,600,000

(iii). Journal entry on interest payment date (Dec. 31, 2017)

Dr. Interest expense ($\$8,000,000 \times 12\% \times 4/12$)	320,000	
Dr. Accrued interest payable ($\$8,000,000 \times 12\% \times 2/12$)*	160,000	
Cr. Cash ($\$8,000,000 \times 12\% \times 6/12$)		480,000

* does not use reversing entries

(iv). Journal entry on retirement of the bonds (March 31, 2018)

Dr. Bonds payable	8,000,000	
Dr. Interest expense ($\$8,000,000 \times 12\% \times 3/12$)	240,000	
Cr. Cash		8,180,000
Cr. Gain on retirement of bonds		60,000

b. The most likely reason why the company was able to repurchase its bonds at a discount on March 31, 2018 is that the market interest rate for similar bonds had increased and was then greater than the coupon rate on the Club Country bonds. The decline in the market price of the company's bonds may have also been attributable to a perceived increase in the probability of default by the market and/or one or more of the debt rating agencies downgrading the rating on the bond.

Diff: 2 Type: ES

Skill: Comp

Objective: 12.4 Apply accrual accounting to the derecognition of financial liabilities.

12.5 Learning Objective 5

1) Bailey's Gold Mines Inc. (BGMI) purchases a piece of land for the purpose of developing a gold mine. BGMI is legally required to remove all structures and convert the mine site to a wildlife sanctuary at the end of its estimated 10-year useful life. BGMI estimates that it will have to spend \$11,000,000 to decommission the site and reclaim the land when operations cease. The present value of this \$11,000,000 site restoration cost, assuming a discount rate of 5%, is \$6,753,046. BGMI uses straight-line depreciation. Required: Prepare the journal entries to recognize this site restoration cost the company would record upon initial acquisition and subsequently.

Answer:

Upon Acquisition:

Dr. Land	\$6,753,046	
Cr. Obligation for future site restoration cost (PV of \$11,000,000, N=10, 5%)		\$6,753,046

Each year :

Dr. Depreciation expense (\$6,753,046/10 years)	675,304.60	
Cr. Accumulated depreciation – land		675,304.60

Year 1:

Dr. Interest expense (\$6,753,046 × 5%)	\$337,652	
Cr. Obligation for future site restoration cost		\$337,652

Year 2:

Dr. Interest expense ((\$ 6,753,046 + 337,652) × 5%)	\$354,535	
Cr. Obligation for future site restoration cost		\$ 354,535

Diff: 2 Type: SA

Skill: Comp

Objective: 12.5 Apply accrual accounting to decommissioning and site restoration obligations.

12.6 Learning Objective 6

1) Jamieson Inc. issues US\$1,000,000 of two-year bonds on January 1, 2017, at par that mature on December 31, 2018.

The coupon rate on the bonds is 4% payable annually on December 31. Jamieson's year-end is December 31. It does not accrue interest throughout the year. Exchange rates:

- January 1, 2017, C\$1.00 = US\$0.99
- December 31, 2017, C\$1.00 = US\$0.97
- December 31, 2018, C\$1.00 = US\$1.01
- Average rate 2018, C\$1.00 = US\$0.98
- Average rate 2018, C\$1.00 = US\$0.99

Required:

- a) Record the journal entry on the date of issuance of the bond
- b) Record the journal entry to revalue the obligation at the period end, December 31, 2017.
- c) Record the journal entry to record the payment of interest, December 31, 2017.

Answer:

- a) Record the journal entry on the date of issuance of the bond

Dr. Cash	\$1,010,101	
Cr. Bonds payable		\$1,010,101

$$\text{US\$ } 1,000,000 \times \text{C\$ } 1./\text{US\$ } 0.99 = \text{C\$ } 1,010,101$$

- b) Record the journal entry to revalue the obligation at the period end, December 31, 2017.

Dr. Foreign exchange loss	\$20,827	
Cr. Bond payable		\$20,827

$$\begin{aligned} \text{US\$ } 1,000,000 * \text{C\$ } 1./\text{US\$ } 0.97 &= \text{C\$ } 1,030,928 \\ \$1,030,928 - \$1,010,101 &= \$20,827 \end{aligned}$$

- c) Record the journal entry to record the payment of interest, December 31, 2017.

Dr. Interest expense	\$40,816	
Dr. Foreign exchange loss	\$421	
Cr. Cash		\$41,237

$$\begin{aligned} \text{US\$ } 1,000,000 * 4\% &= \text{US\$ } 40,000 * \text{C\$ } 1./\text{US\$ } .97 = \text{C\$ } 41,237 \\ \text{US\$ } 40,000 * \text{C\$ } 1./\text{US\$ } .98 &= \$40,816 \\ \$41,237 - \$40,816 &= \$421 \end{aligned}$$

Diff: 2 Type: SA

Skill: Comp

Objective: 12.6 Describe how non-current liabilities are presented and disclosed.

2) A company is required to disclose information that enables users to evaluate the significance of financial liabilities on its financial position and performance.

Required: List 8 essential aspects that disclosure over financial liabilities should cover:

Answer:

- a) The nature of contingent liabilities.
- b) A summary of the accounting policies used to determine the measurement basis of valuing liabilities—for example, amortized cost.
- c) Pertinent details of the indebtedness, including collateral pledged and call or conversion privileges.
- d) The fair value of each class of financial liability and how this was determined—for example, discounted cash flow analysis.
- e) Total interest expense on liabilities other than those valued at fair value through profit and loss.
- f) A schedule that details the contractual maturity dates of financial liabilities.
- g) The nature and extent of risks arising from financial liabilities, including credit risk, liquidity risk, and market risk.
- h) Details of any obligations in default, including the carrying amount of loans in default at statement date.

Diff: 2 Type: SA

Skill: Concept

Objective: 12.6 Describe how non-current liabilities are presented and disclosed.

3) Contrast the differences between IFRS and ASPE for financial liabilities using the following table:

ISSUE	IFRS	ASPE
Amortization of premiums and discounts on financial liabilities		
Increase the provision for site restoration costs due to the passage of time		

Answer:

ISSUE	IFRS	ASPE
Amortization of premiums and discounts on financial liabilities	Enterprises must use the effective interest method.	Enterprises may use either the effective interest method or the straight-line method because ASPE does not specify a method of amortization.
Increase the provision for site restoration costs due to the passage of time	Charged to interest expense	Charged to accretion expense

Diff: 2 Type: SA

Skill: Concept

Objective: 12.6 Describe how non-current liabilities are presented and disclosed.

4) Sarah Braun is the owner of Sarah's Shameless Boutique Corp. (SSBC), a newly incorporated company. Sarah believes that she has a great concept but does not have a lot of money to start the business. Sarah is fairly resourceful, though, and has been able to arrange the following:

1. On July 1, 2018, SSBC provides a vendor with a \$18,500 non-interest-bearing note due on July 1, 2019, in exchange for furniture with a list price of \$18,100. Sarah Braun guarantees the debt.
2. On August 1, 2018, SSBC buys a photocopier listed for \$2,900. The office supply store agrees to accept a \$800 down payment and a \$2,100, three-year note payable at \$798 per year including interest at 7% with the first payment due on August 1, 2019. The loan is secured by a lien on the photocopier.
3. On September 1, 2018, SSBC borrows \$15,000 from its bank for working capital purposes. The loan, plus interest at 12% per annum, is due on June 30, 2019. SSBC grants the bank a security interest in its accounts receivables and inventory.

Unfortunately, SSBC's target audience is a bit more prudish than she anticipated and sales have been slow. While the company was able to retire the bank loan on the due date, it had insufficient cash to pay off the furniture loan. The vendor agrees to accept 2,000 common shares in SSBC in settlement of the obligation. Sarah believed that the shares are worth \$20 each, but as this was the first time that SSBC had issued shares to anyone other than Sarah, a fair market price was not yet established.

SSBC's year-end is June 30. The company's banker has suggested that an appropriate market rate for SSBC is 12% per annum for loans that mature in one year or less and 14% for loans with longer maturities.

Required:

- a. Prepare journal entries to record:
 - i. The purchase of the office furniture.
 - ii. The acquisition of the photocopier.
 - iii. The receipt of the loan proceeds.
 - iv. Payments and accruals on June 30, 2018.
 - v. The retirement of the office furnishings loan on July 1, 2018.
- b. Briefly describe the note disclosure that would be required with respect to the foregoing liabilities.

Answer:

a(i). The fair value of the note is determined using discounted cash flow analysis. The market rate suggested by the bank has been used to discount the obligation. List prices are not necessarily a reliable indicator of the asset's fair market value.

- $PV = \$18,500 / 1.12 = \$16,518$

Using a BAII PLUS financial calculator

- 1 N, 12 I/Y, 18500 FV, CPT PV PV = -16,518 (rounded)

Dr. Office furniture	16,518	
Cr. Notes payable (furniture)		16,518

a(ii). The fair value of the note is determined using discounted cash flow analysis as the interest rate in the note is less than the market rate.

Using a BAII PLUS financial calculator

- 3 N, 14 I/Y, 798 PMT, CPT PV PV = -1,853 (rounded)

Dr. Office equipment (\$1853 + \$800)	2,653	
Cr. Notes payable (equipment)		1,853
Cr. Cash		800
a(iii). Dr. Cash	15,000	
Cr. Notes payable (bank)		15,000
a(iv). Dr. Interest expense ($\$16,518 \times 12\% \times 365/365$)	1,982	
Cr. Notes payable (furniture)		1,982
Dr. Interest expense ($\$1,853 \times 14\% \times 334/365$)	237	
Cr. Notes payable (equipment)		237
Dr. Notes payable (bank)	15,000	
Dr. Interest expense ($\$15,000 \times 12\% \times 302/365$) (# days— include the day issued but not the day paid off)	1,489	
Cr. Cash ($\$10,000 + \496)		16,489
a(v). Dr. Notes payable (furniture) ($\$16,518 + 1,982$)	18,500	
Cr. Common shares		18,500

b. SSBC disclosure relative to the outstanding liabilities would include:

- that the liabilities are carried at amortized cost
- details of the indebtedness including the collateral pledged
- the fair value of each class of financial liability and how this was determined
- total interest expense
- a schedule that details the contractual maturity dates of financial liabilities
- the nature and extent of risks arising from financial liabilities, including credit, liquidity, and market risk

Diff: 2 Type: ES

Skill: Comp

Objective: 12.6 Describe how non-current liabilities are presented and disclosed.