COLLEGE OF BUSINESS, PEACE, LEADERSHIP AND GOVERNANCE

FINANCIAL MANAGEMENT 11: MAC 410

END OF SECOND SEMESTER EXAMINATIONS

April/May 2019

LECTURER: Mr. Brighton Mutingwende

DURATION: 3 HOURS

INSTRUCTIONS

Answer **ALL** the questions in **Section A** and ALL in **Section B**
Section A carries 40 marks and Section B carries 60 marks
Total possible mark is **100**

Start **each** question on a new page on your answer sheet.

The marks allocated to **each** question are shown at the end of the section.

Section A (40 Marks)

1. If you put $600 in a savings account that yields an 8% rate of interest compounded weekly, what will the investment be worth in 37 weeks (round to the nearest dollar)?
   a. $648
   b. $635
   c. $634
   d. $645

2. What is the value of $750 invested at 7.5% compounded quarterly for 4.5 years (round to nearest $1)?
   a. $1,048
   b. $1,010
   c. $1,038
   d. $808

3. If you want to have $2,100 in 3 years, how much money must you put in a savings account today? Assume that the savings account pays 7% and it is compounded quarterly.
   a. $1,656
   b. $1,705
   c. $1,674
   d. $1,697

4. If the interest rate is zero:
   a. $PV = FV^n$
   b. $PV = FV^n$
   c. $FV = PV$
   d. $FV = PV/e^n$

5. A company has in issue loan notes with a nominal value of $100 each. Interest on the loan notes is 6% per year, payable annually. The loan notes will be redeemed in eight years' time at a 5% premium to nominal value. The before-tax cost of debt of the company is 7% per year.

   What is the ex interest market value of each loan note?
   A $94·03
   B $96·94
   C $102·91
   D $103·10

6. A company has just paid an ordinary share dividend of 32·0 cents and is expected to pay a dividend of 33·6 cents in one year's time. The company has a cost of equity of 13%.

   What is the market price of the company's shares to the nearest cent on an ex dividend basis?
   A $3·20
   B $4·41
   C $2·59
   D $4·20

7. The home currency of ACB Co is the dollar ($) and it trades with a company in a foreign country whose home currency is the Dinar. The following information is available:

	Home country	Foreign country
Spot rate 20·00 Dinar per $		
Interest rate	3% per year	7% per year
Inflation rate	2% per year	5% per year

   What is the six-month forward exchange rate?

   A 20·39 Dinar per $
   B 20·30 Dinar per $

C 20·59 Dinar per $
D 20·78 Dinar per $

8. The following financial information relates to an investment project:

	$'000	
Present value of sales revenue		50,025
Present value of variable costs		25,475
Present value of contribution		24,550
Present value of fixed costs	18,250	
Present value of operating income	6,300	
Initial investment	5,000	
Net present value	1,300	

What is the sensitivity of the net present value of the investment project to a change in sales volume?

A 7·1%
B 2·6%
C 5·1%
D 5·3%

9. SKV Co has paid the following dividends per share in recent years:

Year	20X4	20X3	20X2	20X1	
Dividend ($ per share)		0·360	0·338	0·328	0·311

The dividend for 20X4 has just been paid and SKV Co has a cost of equity of 12%.

Using the geometric average historical dividend growth rate and the dividend growth model, what is the market price of SKV Co shares on an ex dividend basis?

A $4·67
B $5·14
C $5·40
D $6·97

10. 'There is a risk that the value of our foreign currency-denominated assets and liabilities will change when we prepare our accounts'

To which risk does the above statement refer?

A Translation risk
B Economic risk
C Transaction risk
D Interest rate risk

11. Carp Co has announced that it will pay an annual dividend equal to 55% of earnings. Its earnings per share is $0.80, and it has ten million shares in issue. The return on equity of Carp Co is 20% and its current cum dividend share price is $4.60.

What is the cost of equity of Carp Co?

A 19.4%
B 20.5%
C 28.0%
D 22.7%

12. A company is evaluating an investment project with the following forecast cash flows:

Year	0	1	2	3	4	
Cash flow ($m)		(6·5)	2·4	3·1	2·1	1·8

Using discount rates of 15% and 20%, what is the internal rate of return of the investment project?

A 15·8%
B 17·2%
C 17·8%
D 19·4%

13. An investor plans to exchange $1,000 into euros now, invest the resulting euros for 12 months, and then exchange the euros back into dollars at the end of the 12-month period. The spot exchange rate is €1·415 per $1 and the euro interest rate is 2% per year. The dollar interest rate is 1·8% per year.

Compared to making a dollar investment for 12 months, at what 12-month forward exchange rate will the investor make neither a loss nor a gain?

A €1·223 per $1
B €1·412 per $1
C €1·418 per $1
D €1·439 per $1

14. On a market value basis, GFV Co is financed 70% by equity and 30% by debt. The company has an after-tax cost of debt of 6% and an equity beta of 1·2. The risk-free rate of return is 4% and the equity risk premium is 5%.

What is the after-tax weighted average cost of capital of GFV Co?

A 5·4%
B 7·2%
C 8·3%
D 8·8%

15. **Which of the following statements is/are correct?**

1 An increase in the cost of equity leads to a fall in share price
2 Investors faced with increased risk will expect increased return as compensation
3 The cost of debt is usually lower than the cost of preference shares

A 2 only
B 1 and 3 only
C 2 and 3 only
D 1, 2 and 3

16. A company has just paid an ordinary share dividend of 32·0 cents and is expected to pay a dividend of 33·6 cents in one year's time. The company has a cost of equity of 13%.

What is the market price of the company's shares to the nearest cent on an ex dividend basis?

A $3·20
B $4·41
C $2·59
D $4·20

Section B (60 Marks)

Question 17

Initial Investment: $300,000.

Cash inflows :$120,000 at current price levels are expected for three years.

Tax-allowable depreciation of 25% on the RB basis, which can be claimed at the start of the project. Machine will be disposed at $50,000 after 3 years.

The tax rate is 30% and tax is payable 50% in the current year, 50% one year in arrears. The pre-tax cost of capital is 22% and the rate of inflation is 10%.

Assess whether the project should be undertaken**. (10 Marks)**

Question 18

Lane Co has in issue 3% convertible loan notes which are redeemable in five years' time at their nominal value of $100 per loan note. Alternatively, each loan note can be converted in five years' time into 25 Lane Co ordinary shares. The current share price of Lane Co is $3·60 per share and future share price growth is expected to be 5% per year.
The before-tax cost of debt of these loan notes is 10% and corporation tax is 30%.

Required: What is the current market value of a Lane Co convertible loan note? (10 marks)

Question 19

The home currency of ACB Co is the dollar ($) and it trades with a company in a foreign country whose home currency is the Dinar. The following information is available:

	Home country	Foreign country
Spot rate 20·00 Dinar per $		
Interest rate	3% per year	7% per year
Inflation rate	2% per year	5% per year

Required: What is the six-month forward exchange rate? (10 marks)

Question 20

Makonis Co, a listed company producing motor cars, wants to acquire Nuvola Co, an engineering company involved in producing innovative devices for cars. Makonis Co is keen to incorporate some of Nuvola Co's innovative devices into its cars and thereby boosting sales revenue. The following financial information is provided for the two companies:

Makonis Co	Nuvola Co	
Current share price	$5·80	$2·40
Number of issued shares	210 million	200 million
Equity beta	1·2	1·2
Asset beta	0·9	1·2

It is thought that combining the two companies will result in several benefits. Free cash flows to firm of the combined company will be $216 million in current value terms, but these will increase by an annual growth rate of 5% for the next four years, before reverting to an annual growth rate of 2·25% in perpetuity. In addition to this, combining the companies will result in cash synergy benefits of $20 million per year, for the next four years. These synergy benefits are not subject to any inflationary increase and no synergy benefits will occur after the fourth year. The debt-to-equity ratio of the combined company will be 40:60 in market value terms and it is expected that the combined company's cost of debt will be 4·55%.

The corporation tax rate is 20%, the current risk free rate of return is 2% and the market risk premium is 7%. It can be assumed that the combined company's asset beta is the weighted average of Makonis Co's and Nuvola Co's asset betas, weighted by their current market values.

Required:

(a) Estimate the additional equity value created by combining Nuvola Co and Makonis Co, based on the free cash flows to firm method. Comment on the results obtained and briefly discuss the assumptions made. (**16 marks**)

Briefly outline the possible reasons for Makoni Co to aquire Nuvola Co and what are some of the synergies that may arise as a result of the merger. (8 Marks)

If the managers of Nuvola are not happy with the merger, outline some of the defence mechanisms both pre and post offer available to Nuvola. (6 Marks)