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CHRISTIAN SERVICE UNIVERSITY COLLEGE

KUMASI, GHANA

CSUC SCHOOL OF BUSINESS

DEPARTMENT OF ACCOUNTING AND FINANCE

MSC ACCOUNTING AND FINANCE

END OF FIRST SEMESTER EXAMINATIONS – 2021/2022 ACADEMIC YEAR

LEVEL 500

MASF 505: CORPORATE FINANCE

April, 2022 **140 MARKS** **TIME ALLOWED: 3 HOURS**

GENERAL INSTRUCTIONS TO CANDIDATES:

- *The paper is divided into three sections; A,B and C*
- *Answer all questions in Sections A and B*
- *Answer only two questions from section C.* ***Question ONE*** *and any other question*
- *Write your index number on top of the question paper and every page of the answer booklet used.*

Examiner: Osei-Anim Reindolph

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SECTION A (25MARKS)

1. The 182-day annualized T-bill is 9% P.A. The return on market is 15% P.a and the beta of stock B is 1.5. What is the required rate of return from investment in stock B?
   A. 17% P.a
   B. 18% P.a
   C. 19% P.a
   D. 20% P.a
2. Which of the following statements is correct regarding profit maximization as the primary goal of the firm?
   A. Profit maximization considers the firm's risk level
   B. Profit maximization will not lead to increasing short-term profits at the expense of lowering expected future profits
   C. Profit maximization does consider the impact on individual shareholders EPS
   D. Profit maximization is concerned with maximizing net income than stock price.
3. Which of the following statement (s) is/are true about leveraging in a firm?
   A. Less EBIT goes to investors in a leveraged firm
   B. More EBIT goes to investors in an unleveraged firm
   C. More EBIT goes to investors in a leveraged firm
   D. Both investors in leveraged and unleveraged firm receive the same amount of EBIT
4. Agency conflicts arise between shareholders and debt holders because
   A. Debt holders have preference for higher-risk projects than shareholders
   B. Shareholders have preference for higher-risk project than debt holders
   C. Managers prefer to use debt finance rather than equity
   D. Shareholders prefer equity finance to debt finance
5. The motivation for investing in zero coupon bond is that
   A. Zero coupon bonds are sold at premium and redeemed at par
   B. Zero coupon bonds are sold at par and redeemed at premium
   C. Zero coupon bonds are sold at discount and redeemed at par
   D. Risk preferring investors are indifferent to zeros
6. Lakamuun bonds have 12 years remaining to maturity with interest paid annually, the bonds have a $1000 par value and the coupon interest rate is 10 percent. If the bonds sell at a price of $850, what is the ***yield to maturity (YTM)*** of the bond?
   A. 18%
   B. 12.2%
   C. 30%
   D. 22%
7. The most appropriate goal of the firm is
   A. Profit maximization
   B. EPS maximization
   C. Stakeholder maximization
   D. Shareholder value maximization

8. According to MM theory of capital structure under zero taxes, the mix of debt and equity has no effect on the market value of the firm. This is because
   A. Shareholders prefer debt financing whiles managers prefer equity so the net gain/loss is zero
   B. Managers prefer debt financing whiles shareholders prefer equity finance so the net gain/loss is zero
   C. An increase in ROE resulting from financial leverage is exactly offset by an increase in risk
   D. An increase in ROE resulting from operating leverage is exactly offset by a decrease in risk
9. Which of the following is **not** a characteristic of dividends?
   A. Dividends are not liability of the firm until it has been declared
   B. Non-payment of dividends does not create bankruptcy cost
   C. Dividend payments are hugely business expense
   D. Dividends are not tax deductible
10. If a firm needs $100 million to finance its new project and the floatation cost is expected to be 5.5%, how much should the firm raise by selling securities.
    A. $5.82 million
    B. $100 million
    C. $105.82 million
    D. $18.2 million
11. A high proportion of fixed cost in a company's capital increases its
    A. Financial leverage
    B. Operating leverage
    C. Indebtedness
    D. Variable costs
12. A bond has a maturity period of 3years, a coupon rate of 9% and a yield to maturity of 12%. Calculate the duration of the bond.
    A. 4.75 years
    B. 10 years
    C. 12 years
    D. 2.75 years
13. Which of the following is not a characteristic of a preference share?
    A. Ranks last for payment in the event of company liquidation
    B. Unpaid dividends accrues until it can be paid
    C. Do not usually have voting rights unless dividends fall into arrears
    D. It is more like debt than a share in its characteristics
14. Which of the following is not one of the qualities which make debt attractive to firms?
    A. The cost of debt is generally less than the cost of share capital and hence can lower the overall cost of capital for a firm
    B. Debt interest only gets paid when the company makes profit
    C. It reduces the amount of corporate tax payable by firms by reducing the amount of taxable profit
    D. The required return on debt is lower because from the lenders point of view, debt is less risky than equity.

15. Which of the following is not a defining quality of a bond?
    A. Dividend yield
    B. Maturity
    C. Face value
    D. Coupon payment frequency
16. Under which of the following market efficiency regimes would technical analysis not generate abnormal returns
    A. Weak market efficiency
    B. Semi-strong market efficiency
    C. Strong form market efficiency
    D. All the three
17. Which of the following investment will be characterized by the highest monetary return at the end of the investment horizon Assume annual compounding
    A. 5 years at the interest rate of 5% per year
    B. 7 years at the interest rate of 3% per year
    C. 4 years at the interest rate of 9% per year
    D. 2 years at the interest rate of 6% per year
18. Using the NPV as a selection criterion, a project should be selected when its
    A. NPV is positive or zero
    B. NPV is equal to zero
    C. NPV is negative
    D. NPV is positive only
19. Which of the following is not a criticism of payback period method?
    A. It ignores potentially valuable cash flow after the cut-off point
    B. The cut-off point for recovery of investment outlay is arbitrary
    C. The technique cannot be adapted to discounted cash-flow method
    D. It may not help to resolve large amount of uncertainty
20. If C_o stands for the initial cash flow, r for the rate of interest (annual) and "n" for the number of periods (years) then the future value (FV) is given by
    A. $FV = C_o(1+r)_n$
    B. $FV = C_c + (1+r)n$
    C. $FV = \frac{C_o}{(1+r)^n}$
    D. $FV = C_o(1+r)^n$
21. Which of these activities does not exclusively come within the scope of corporate financial decision-making?
    A. How much should be invested
    B. How much is to be allocated to the marketing budget
    C. Which type of finance should be chosen
    D. How much finance should be raised
22. Asymmetric information occurs because
    A. One party to a financial transaction has more information than another
    B. Stock market prices on the internet lag real times price by up to fifteen minutes
    C. Not all investors understood company accounts and balance sheets
    D. Not all shareholders are able to attend company annual general meetings

23. In terms of relative risk, which of the following is true?
    A. Debt is risky for investors while equity is risky for the firm
    B. Both are equally risky for investors
    C. Both are equally risky for the firm
    D. Debt is risky for the firm while equity is risky for the investor
24. What is the general phenomenon known as gearing?
    A. Gearing represents the effect whereby greater fixed cost leads to greater variability.
    B. Gearing represents the effect whereby greater variable cost leads to greater variability of business outcomes
    C. Gearing represents the effect whereby greater fixed cost leads to less variability of business outcome
    D. Gearing represents the effect whereby greater variable cost leads to less variability of business outcome
25. If the weight of equity in total capital is1/3, that of debt is 2/3, the return on equity is 15% that of debt is 10% and the corporate tax rate is 32%. What is the weighted average cost of capital (WACC)
    A. 10.533%
    B. 7.533%
    C. 9.533%
    D. 11.350%
26. Which of the following is true about leveraged beta?
    A. Leveraged beta represents fundamental operational risk
    B. Leveraged beta represents financial risk from leverage
    C. Leveraged beta represents fundamental operational risk plus financial risk from leverage
    D. Leveraged beta represents fundamental operational risk minus financial risk from leverage
27. Pecking order theory suggests which of the following?
    A. Internal funds, debt and external equity have the same risk-adjusted return
    B. Debt is preferred to external equity and internal funds
    C. External equity is preferred to debt which is preferred to internal funds
    D. Internal funds is preferred to debt which is also preferred to equity
28. Volatility of risk of a single asset is usually measured by
    A. Variance
    B. Covariance
    C. Standard deviation
    D. Beta
29. If an asset has a zero beta, then it can be described as
    A. very risky
    B. risk free
    C. riskier than the market portfolio
    D. having the same risk is the market portfolio
30. Which of the following should be included at the start of the project?
    A. Research costs
    B. Historical cost
    C. Investment in fixed and working capital
    D. Continuation value

31. A bank uses the policy of half yearly compounding for its term deposits. A customer deposits \$10,000 for 5 years. The bank has mentioned 9% compounding, calculate the maturity amount
    A. \$15,387
    B. \$16,506
    C. \$15,530
    D. \$15,657
32. If a corporation goes bankrupt, who is/are first entitled to a corporation's assets?
    A. President of corporation
    B. Preferred stockholder
    C. Loans from banks, bondholders and taxes from government
    D. Common stockholders
33. What is the difference between current ratio and the quick ratio?
    A. The current ratio includes inventories and the quick ratio does not
    B. The current ratio does not include inventories and the quick ratio does
    C. The current ratio includes physical capital and the quick ratio does not
    D. The current ratio does not include physical capital and the quick ratio does.
34. Which of the following statements is **not** true with respect to the matching strategy?
    A. All assets should be financed with permanent long term capital
    B. Temporary current assets should be financed with temporary working capital.
    C. Permanent current assets should be financed with permanent working capital.
    D. Long term assets should be financed from long term capital.
35. To a financial analysts; working capital means the same thing as
    A. Total assets
    B. Fixed assets
    C. Current assets
    D. Current asset minus currents liability
36. The purchasing power of money depends upon the ....
    A. Price level
    B. Demand level
    C. Supply level
    D. Distribution level
37. According to marketability feature, bonds which are attached to stock warrants have
    A. Decreased floatation
    B. Increased floatation
    C. Increased marketability
    D. Decreased marketability

Use the extract below to answer questions 38 and 39

Your firm is considering building a new office complex. Your firm already owns land suitable for the new complex. The current book value of the land is \$100,000. However a commercial real estate agent has informed you that an outside buyer is interested in purchasing this land and would be willing to pay \$650,000 for it. When calculating the net present value (NPV) of your new office complex ignoring taxes,

38. The appropriate incremental cashflow for the use of this land is
    A. $650,000
    B. $550,000
    C. $750.00
    D. 100,000
39. What general deductions can be made from the following financial decision?
    A. Market value of an asset is always greater than the book value
    B. Opportunity cost of using an asset is equal to its market values
    C. Book value of an asset is always discarded in making financial decisions.
    D. The book value of an asset is greater than its market value
40. Which of the following costs would you consider when making capital budgeting decisions?
    A. Sunk cost
    B. Opportunity cost
    C. Interest expense
    D. Fixed overhead cost

A bond is represented by the following information

Use this information to answer questions 41 to 45.

$1000 (X)	
5yrs (Y)	12% (Z)

41. What does X, Y and Z represent?

	X	Y	Z
A.	Face Value	coupon rate	maturity
B.	Coupon rate	maturity	par value
C.	Par value	maturity	yield to maturity
D.	Face value	maturity	coupon rate

42. What is the coupon payment of this bond?
    A. $ 1200
    B. $11200
    C. $1020
    D. $120
43. How much will the holder of this bond receive in the 3rd year?
    A. $ 1200
    B. $11200
    C. $1020
    D. $120
44. How much will the holder of the bond receive in the 5th year
    A. $ 1200
    B. $1120
    C. $1020
    D. $120

45. If the prevailing market interest rate is 12% then it can be concluded that the bond is sold at
    - A. Premium
    - B. Par
    - C. Discount
    - D. Maximum

A project requires an initial outlay of $500,000 to achieve all its objectives. Shareholders require a return of 12% on their investment. The cashflows from the project for the next five (5) years are presented in the table below. ***Use it to answer the questions 46 to 50***

Year	**Cash flows**	**Discount value**	**Present value**
1	250,000	0.893	**Q46**
2	**Q47**	0.797	79700
3	**Q48**	0.712	85440
4	300,000	**Q49**	190800
5	320,000	0.567	

46.
    - A. 225000
    - B. 223250
    - C. 703243
    - D. 191800

47.
    - A. 90,000
    - B. 100,000
    - C. 150,000
    - D. 350,000

48.
    - A. 250,000
    - B. 300,000
    - C. 120,000
    - D. 343,000

49.
    - A. 0.543
    - B. 0.636
    - C. 0.793
    - D. 0.715

50. What is the Net Present Value (NPV) of the project?
    - A. 193,434
    - B. 760,767
    - C. 260,767
    - D. 243,184

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SECTION B

60 MARKS

Answer all questions in this section

1. Corporate taxes favour debt financing but personal taxes favour equity financing, in effect personal taxes lesson the advantage of corporate debt. Briefly explain this statement.**5marks**
2. Differentiate between ***signalling theory*** and ***pecking order theory***. Explain their implications in project finance. **3marks**
3. How does risk premium differ from market risk premium? Show how each of them can be corrupted manually. **2marks**
4. Orchestra Inc. stock currently sells for $20 a share. The stock just paid a dividend of $1.00 a share. The dividend is expected to grow at a constant rate of 10%. What stock price is expected 1 year from now? **3marks**
5. Briefly explain preemptive rights and indicate how stockholders benefit from these rights. **2marks**
6. In computing the price of a bond under semi-annual compounding state three modifications which are done to the original bond value formula. **3marks**
7. Suppose a firm has a $1000 face value, maturity in three years with a 10 percent coupon rate paid semi-annually, calculate the price of the bond assuming corporate debt yield of 12% **5marks**
8. Briefly distinguish between *yield to maturity (YTM) and yield to call (YTC)* **5marks**
9. Briefly explain why the return on equity (ROE) increases when a firm becomes leveraged? **2marks**
10. i. What is agency problem? State three features that contribute to the existence of agency problem. **3marks**

    ii. Explain why shareholders prefer debt financing to equity financing as an attempt to reduce agency problem. **2marks**
11. Why should investors view the issuance of stock as a negative signal when managers want to raise finance for a project? Explain how investors can deal with this situation. **2marks**
12. Explain the main difference between ***financial leverage*** and ***operating leverage.*** Which categories of investors bear these risks? **2marks**
13. A business has variable cost of £3500 and total cost £11250. If a revenue of £16000 was made at year end, Calculate the
    - i. break even sales level **2marks**
    - ii. Margin of Safety **2marks**
    - iii. What is the significance of the breakeven sales level? **2marks**

14. What is the relationship between bond value and interest rate? Explain how this relationship affects bond holders. **2marks**
15. A project has a net present value (NPV) of zero (0). Should this project be accepted or rejected? Explain the intuition behind your answer. **2marks**
16. Why do organizations perform ***"treasury stock operations"*** **2marks**
17. Preferred stock behaves both like debt and equity. Under what situation(s) does a preferred stock behave like debt instrument? **2marks**
18. With the aid of a diagram explain how a firm's growth rate and required return affects stock prices. **3marks**
19. a. Distinguish between diversifiable and non-diversifiable risk. Giving examples, explain why some risks are diversifiable and others are non-diversifiable. **4marks**

    b. Ewald Company's current stock price is $36, and its last dividend was $2.40. In view of Ewald's strong financial position and its consequent low risk, its required rate of return is only 12 percent. If dividends are expected to grow at a constant rate, g, in the future, and if *Ks* is expected to remain at 12 percent, what is Ewald's expected stock price 5 years from now. **5marks**
20. A company currently pays a dividend of $2 per share. It is estimated that the company's dividend will grow at a rate of 20% per year for the next 2 years, and then the dividend will grow at a constant rate of 7% thereafter. The company's stock has a beta equal to 1.2, the risk free-rate is 7.5% and the market risk premium is 7%. What would you estimate the stock's current price? **10marks**

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SECTION C

ANSWER QUESTION ONE AND ANY OTHER QUESTION

QUESTION ONE (COMPULSORY) (55marks)

A. Orchestra Inc. is a company into furniture production. The company intends to increase its production capacity. The company intends to buy an equipment of a total depreciable cost of $200,000. The shipping and installation cost would amount to $40,000. As a result of the expansion, inventories will rise by $25,000 and accounts pay will rise by $5,000. This new project will increase sales to 100,000 units per year at $2 per unit. The variable cost of the project is 60% of the total sales. The project will span for four (4) years. The salvage value of the equipment is estimated to be $25,000. Orchestra Inc. is within a tax bracket of 40%. The company uses straight line depreciation

Required

(a) Estimate the free cashflows for the four year period **(15marks)**

(b) Deduce the following using a WACC of 10%

(i) Payback period of the project **(5marks)**

(ii) The net present value (NPV) **(5marks)**

(iii) Internal rate of return (IRR). **(8marks)**

(c) Should Orchestra consider the expansion project? Justify your answer **(5marks)**

B. Bolden Inc. has issued a bond with a face value of $1000 and a coupon interest rate of 15% annually. The yield to maturity is 12% and the bond has a maturity of 10years.

Required:

i. Estimate the price of the bond. **3marks**

ii. Is the bond selling at a discount, premium or at par? **2marks**

iii. Determine the duration of the bond. **3marks**

D. i. Discuss the three risks faced by bond holders **3marks**

ii. Bonds are generally classified under four main types. Discuss the four types of bonds available to bond holders. **3marks**

iii. Distinguish between debt capital and equity capital **3marks**

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QUESTION TWO (20marks)

A. Akwanuasah Limited is a firm which is into furniture production. The firm has the following capital structure

Equity share capital of $10 each	$500,000
12% preference share capital of $100 each	$100,000
Reserves and surplus	$200,000
11% debenture of $100 each	$100,000
8% term loan	$100,000

Note

i. The current market price of equity share is $20. The dividend per share is $3 which has an expected annual growth rate of 5%.

ii. The current market price of preference share is $104 and it is redeemable after 10 years with 10% premium.

iii. The debenture is traded at a market price of $95 and redeemable after 5 years with 10% premium.

iv. The applicable tax rate is 40%.

Calculate the weighted average cost of capital using

a) The book value as weight. **8marks**

b) The market value as weight. **8marks**

B. We assume in finance that the objective of the firm is to maximize shareholder wealth. Explain why the shareholder wealth maximization is preferred to profit maximization. **2marks**

C. Distinguish between direct and indirect finance as used in financial markets. **2marks**

QUESTION THREE (20marks)

Lakamuun Inc. is a firm which is into the production of wool. The firm has an expected EBIT of $500,000 and this will remain constant overtime. Lakamuun pays out all its earnings as dividends. Lakamuun currently finances all its operations with equity. Lakamuun has 100,000 shares outstanding. If the share price is $20, a risk free rate of 600 basis points, a market risk premium of 400bp and a marginal tax rate of 40%.and the book value of equity I s equal to the market value. Lakamuun decides to recapitalise by issuing debt to repurchase stock. The amount of debt borrowed and their respective costs of debt are shown in the table below.

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Amount borrowed $	Cost of debt (kd)
0	-
250,000	10%
500,000	11%
750,000	13%
1,000,000	16%

Required

Complete the table below

(A) 8marks

Debt (000)	Debt – equity ratio	Leverage beta	Cost of equity
0	—	—	—
250	—	—	—
500	—	—	—
750	—	—	—
1000	—	—	—

(B) 8marks

Debt(000)	Dividends	Equity	Total value	Price per share
0	—	—	—	—
250	—	—	—	—
500	—	—	—	—
750	—	—	—	—
1000	—	—	—	—

(c) Deduce the optimal capital structure of the firm and justify your answer **2marks**

d. Discuss the roles played by the Central bank of a country **2marks**

QUESTION FOUR (20marks)

A. Ofori Mintah is a company with five main subsidiaries. The percentage of its business coming from each of the subsidiaries and their respective betas, are given below:

Subsidiary	Percentage of Business	Beta
Real Estate	20%	1.15
Restaurant	10	0.85
Transport	15	1.60
Waste Management	20	1.35
Consultancy Services	35	1.05

Required:

i. Calculate the company's beta **2marks**

ii. Calculate the required rate of return for the company given that the risk free rate of return is 7% and the market return is 12%. **2marks**

iii. If the market rate of return increases to 14%, what will be the company's required rate of return? **2marks**

iv. Recent increase in the demand for processed food necessitated a change in the focus of Ofori Mintah Company. The company is considering an increase in its reliance on the restaurant subsidiary, so that the percentage of its business from this subsidiary will be 20 percent. The company will also decrease its reliance on the consultancy services, so the percentage of its business from that subsidiary will decrease to 25 percent. What will be the required rate of return if they adopt these changes? **2marks**

B. Explain agency problem and state three features that contribute to agency problem

C. Brown and Jestley Products are expected to choose between two asset purchases. The annual rate of return and related probabilities given below summarize the firm's analysis.

State of Economy	**Probability of State of Economy**	**Rate of Return if state Occurs**	
		Stock A	**Stock B**
Boom	.20	18%	22%
Good	.35	15	6
Poor	.30	-5	11
Bust	.15	12	14

Required

i. Calculate the expected return of the two assets **2marks**

ii. Determine their standard deviations **2marks**

iii. Determine the coefficient of variation of the return. **1mark**

iv. Which asset is less risky? Explain. **2marks**

D. State three 'good' financial decisions that promote maximization of a company's share price. **3marks**