

EASTERN UNIVERSITY, SRI LANKA
FACULTY OF COMMERCE AND MANAGEMENT

Third Year Second Semester Examination in Bachelor of Commerce Honours in Accounting and Finance-
2021/2022 (August/September 2024)
(Proper/ Repeat)

DAF 3123 Advanced Corporate Finance

Answer All Questions. Time: One (01) hour.

Calculator Permitted. Use Table Attached.

Index No.....

Part I

Mark 'X' in a cage for the answer chosen.

Question No.	(a)	(b)	(c)	(d)	(e)	Any other Answer
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

Part I

1. Deciding whether all the profits should be distributed or retained or a portion of profits to be distributed and the balance to be retained is referred

(a) Dividend Policy.	(c) Liquidity decision.	(e) Retained Profit
(b) Distribution decision.	(d) Dividend decision.	

2. Determining the Capital Structure of firms is related to

(a) Investment decision.	(c) Dividend decision.	(e) Cost of Capital.
(b) Financing decision.	(d) Liquidity decision.	

3. Managing the current assets of the firm efficiently for safeguarding the firm against the dangers of insolvency is categorized into

(a) Current Asset Management	(c) Working Capital Management	(e) Short term solvency.
(b) Liquidity function	(d) Solvency Management	

4. Which of the following is primarily related to financial goal of a firm?

(a) Maximizing owner's economic welfare	(d) Maximizing profitability
(b) Satisfying its customers	(e) Minimizing financial risk.
(c) Managing financial assets	

5. What are the numerator and denominator of Tobin's q respectively?

(a) Replacement Cost of Assets and Market Value of Assets.
(b) Market Value of Assets and Replacement Cost of Assets.
(c) Replacement Cost of Assets and Current of Cost of Assets.
(d) Fair Value of Net Assets and Replacement Cost of Assets.
(e) Replacement Cost of Net Assets and Market Value of Equity.

6. The extended Du Pont Analysis explains

(a) how the return on assets is influenced by the net profit margin, assets turnover ratio, and the assets to equity ratio.
(b) how the return on equity is influenced by the gross profit margin, assets turnover ratio, and the assets to equity ratio.
(c) how the return on asset is influenced by the net profit margin, assets turnover ratio, and the equity to assets ratio.
(d) how the return on equity is influenced by the net profit margin, assets turnover ratio, and the assets to equity ratio.
(e) how the return on operating assets is defined as the product of the net profit margin, the assets turnover ratio and the total assets to equity ratio.

7. Present Value of an Annuity Due is given by

(a) $P = A \left[\frac{(1+i)^n - 1}{i} \right] (1+i)^n$	(d) $P = A(PVIF_{n-1,i}) + 1$
(b) $P = A \left[\frac{1 - \frac{1}{(1+i)^{n-1}}}{i} \right] + 1$	(e) $A = P(PVIFA_{n-1,i}) + 1$
(c) $P = A(PVIFA_{n-1,i}) + (1+i)$	

8. What is defined by

$A \left[\frac{(1+i)^n - 1}{i} \right] (1+i)$	(d) Present Value of an ordinary Annuity.
(a) Compound Value of an ordinary Annuity.	(e) Compound Value of an Annuity due.
(b) Future Value of an Annuity.	
(c) Present Value of an Annuity Due.	

9. If compounding the value of money is done more than once a year, the effective annual rate of interest would be

(a) Lesser than the nominal interest rate.
(b) Higher than the nominal interest rate.
(c) Remain the same as the nominal interest rate.
(d) Higher or lesser than the nominal interest rate depending on the number of compounding.
(e) Slightly different from the nominal interest rate.

10. In cost-volume-profit analysis for the multi-product firm, a reduction in total fixed cost from the budgeted amount will result in
- no effect in C/S ratio, increase in BEP, and increase in Net Profit.
 - increase in C/S ratio, decrease in BEP, and increase in Net Profit.
 - decrease in C/S ratio, increase in BEP, and increase in Net Profit.
 - no effect in C/S ratio, increase in BEP, and decrease in Net Profit.
 - no effect in C/S ratio, decrease in BEP, and increase in Net Profit.
11. Under which condition will the NPV and IRR give conflicting ranking to the mutually exclusive projects?
- when the cash flow patterns of the projects are same.
 - when the expected life periods of the projects are equal.
 - when the initial cash out flow pattern of the projects are similar.
 - when the cash flow patterns of the projects differ.
 - when the cost of capital of the projects differs.
12. If the required rate of return is greater than the Fisher's intersection rate,
- both NPV and IRR methods will yield consistent results.
 - both NPV and IRR methods will yield contradictory results.
 - Project with higher NPV will have lower IRR.
 - Project with Lower NPV will have higher IRR.
 - NPV and IRR of the both projects will be same.
13. Which is the correct equation of the following for cash flow calculation in capital budgeting analysis?
- Cash flow = Revenue – Expenditure – Capital Expenditure - Depreciation.
 - Cash flow = Revenue – Expenditure – Capital Expenditure + Depreciation.
 - Cash flow = Revenue – Expenditure - Depreciation.
 - Cash flow = Profit – Capital Expenditure - Depreciation.
 - Cash flow = Profit – Capital Expenditure + Depreciation.
14. When the incremental cash flows for an investment are calculated by comparing with a hypothetical zero-cash-flow project, they are called
- Annual Net Cash Flow.
 - Net Working Capital.
 - Absolute Cash Flow.
 - Salvage Value.
 - Terminal Cash Flow.
15. A firm wants to replace an old equipment, which is capable of generating cash flows of Rs.20,000, Rs.10,000 and Rs.5,000 during the next 3 years. It has a book value of Rs.50,000 and a market value of Rs.30,000. The firm is considering a new equipment, which will require an initial cash out lay of Rs.100,000, and is estimated to generate cash flows of Rs.80,000, Rs.70,000 and Rs.45,000 for the next 3 years. Both old and new equipment are assumed to have a zero resale value after 3 years. Ignore Taxes. What is amount of the incremental net cash flow for this replacement project?
- Rs.90,000
 - (Rs.70,000)
 - Rs.60,000
 - Rs.40,000
 - Rs.160,000
16. Which is the correct equation of the following for calculating the Free Cash Flow (FCF) in capital budgeting analysis?
- FCF = Revenue – Expenditure – Capital Expenditure - Depreciation.
 - FCF = EBIT (1-Tax rate) + Depreciation Tax Shield + (+/-) Changes in Net Working Capital – Additional Capital Expenditure.
 - FCF = EBIT (1-Tax rate) + Depreciation + (+/-) Changes in Net Working Capital – Additional Capital Expenditure.
 - FCF = EBIT (1-Tax rate) + Depreciation – (+/-) Changes in Net Working Capital – Additional Capital Expenditure.
 - FCF = Profit After Tax + Depreciation Tax Shield – Additional Capital Expenditure.
17. A firm has a sales of Rs.2,400,000, total assets of Rs.1,800,000, Current liability of Rs.200,000, 10% Long term debt of Rs.500,000, 12% preference share capital of Rs.300,000 and a pretax net profit margin of 20%. Income Tax rate 30%. What is the Total Debt to Equity of this firm?
- 1.2
 - 1.0
 - 0.8
 - 1.5
 - 0.875
18. Referring to the facts given in the Question 17 above, what is the Return on Assets of the firm?
- 26.67%
 - 20.00%
 - 18.67%
 - 15.35%
 - 37.50%
19. Referring to the facts given in the Question 17 above, what is the Return on Equity of the firm?
- 26.67%
 - 20.00%
 - 18.67%
 - 15.35%
 - 37.50%

20. The extracts of financial statements of BPS Plc for the year 2023 show: Sales Rs.2,500,000; Profit After Tax Rs.300,000; Equity Rs.1,250,000; and Total Assets Rs.2,000,000. Which of the following equations correctly fits into the Extended DuPont Framework?
- (a) $ROE = \left[\frac{300,000}{2,500,000} \right] \times \left[\frac{2,000,000}{2,500,000} \right] \times \left[\frac{2,000,000}{1,250,000} \right] = 15.36\%$
- (b) $ROE = \left[\frac{300,000}{2,500,000} \right] \times \left[\frac{2,500,000}{2,000,000} \right] \times \left[\frac{2,000,000}{1,250,000} \right] = 24.00\%$
- (c) $ROE = \left[\frac{300,000}{2,500,000} \right] \times \left[\frac{2,500,000}{2,000,000} \right] \times \left[\frac{1,250,000}{2,000,000} \right] = 9.38\%$
- (d) $ROA = \left[\frac{300,000}{2,500,000} \right] \times \left[\frac{2,500,000}{2,000,000} \right] = 15.00\%$
- (e) $ROA = \left[\frac{300,000}{2,500,000} \right] \times \left[\frac{2,000,000}{2,500,000} \right] = 9.60\%$
21. What will be the future value, after five years from today, of Rs.25,000 invested in a fixed income security which pays 15% interest per annum if the interest is compounded semi-annually? (Use 5 digits Time Value Factor).
- (a) Rs.353,700 (c) Rs.51,525 (e) Rs.51,500
(b) Rs.160,968 (d) Rs.353,675
22. What will be the future value, after four years from today, of Rs.40,000 invested in a fixed income security which pays 16% interest per annum if the interest is compounded quarterly? (Use 5 digits Time Value Factor).
- (a) Rs.783,000 (c) Rs.620,116 (e) Rs.250,520
(b) Rs.873,000 (d) Rs.872,900
23. Suppose that a person deposits Rs.120,000 at the beginning of each year for five years at an interest rate of 15% p.a. How much would this annuity accumulate at the end of the 5th year?
- (a) Rs.809,088 (c) Rs.975,400 (e) Rs.930,451
(b) Rs.390,450 (d) Rs.929,088
24. An investor receives an annuity of Rs.150,000 at the beginning of each year for five years at an interest rate of 14% p.a. What would be the present value of the annuity?
- (a) Rs.587,055 (c) Rs.514,965 (e) Rs.437,055
(b) Rs.680,355 (d) Rs.77,910
25. A company manufactures and sells four types of products under the brand names of A, B, C, and D. The sales mix in value comprises 40%, 20%, 25%, and 15% of products of A, B, C, and D, respectively. The total budgeted sales for a period are Rs.500,000. Variable cost as a percentage of sales: A: 50%, B: 65%, C: 60%, D: 80%. Fixed costs for the period are Rs.110,000. What is the Contribution to Sales ratio of each product respectively?
- (a) 0.60, 0.80, 0.75, and 0.85 (c) 0.40, 0.20, 0.25, and 0.15 (e) 0.50, 0.30, 0.45, and 0.20
(b) 0.50, 0.35, 0.40, and 0.20 (d) 0.50, 0.65, 0.60, and 0.80
26. Referring to the facts given in the Question 25 above, what is the weighted average Contribution to Sales ratio of the company?
- (a) 0.50 (b) 0.30 (c) 0.45 (d) 0.40 (e) 0.35
27. Referring to the facts given in the Question 25 above, what is the total variable cost of the company?
- (a) Rs.300,000 (b) Rs.400,000 (c) Rs.250,000 (d) Rs.200,000 (e) Rs.110,000
28. Referring to the facts given in the Question 25 above, what is the total contribution of the company?
- (a) Rs.300,000 (b) Rs.400,000 (c) Rs.250,000 (d) Rs.200,000 (e) Rs.110,000
29. Referring to the facts given in the Question 25 above, what is the break-even sales of the company?
- (a) Rs.500,000 (b) Rs.275,000 (c) Rs.285,000 (d) Rs.300,000 (e) Rs.90,000
30. A firm purchased a machine for Rs.500,000 under a hire purchase agreement that requires a down payment of Rs.214,500 and year end annual installment of Rs.100,000 including interest for four years. What is the interest rate charged in this transaction?
- (a) 10% (c) 15% (e) 20%
(b) 12% (d) 16%

(Total 40 marks)

EASTERN UNIVERSITY, SRI LANKA
FACULTY OF COMMERCE AND MANAGEMENT

Third Year Second Semester Examination in Bachelor of Commerce Honours in Accounting and Finance-
2021/2022 (August 2024)
(Proper/ Repeat)

DAF 3123 Advanced Corporate Finance

Answer All Questions. Show clear workings.

Time: Two (02) hours.

Use of Calculator and Time Value table is permitted.

Part II

1. (a) A company is creating a sinking fund to redeem its debenture of Rs.1000,000 issued on 1st of July 2023 and maturing after 10 years. The first annual payment was made on the date of issue of debentures. The company will make equal annual payments and expects that the fund will earn an interest of 16% per annum. How much will be the annual amount of sinking fund payment?
- (b) A firm borrowed money that is to be repaid in five years. The firm invested Rs.150,000 at the end of each year at 10% compounded annually so that the loan would be paid back at the end of the 5th year. What would be the amount of the loan?
- (c) A company wants to purchase a building after a couple of years. The target value of the property is Rs.5,000,000. The managers of the company decide to invest in an investment where the company can deposit yearly Rs.500,000 starting at the beginning of each year until the 10th year, earning 12% per annum compounded annually. The managers want to know what is the present value of the annuity investment that they are doing. This would enable them to know what the true cost of the property in today's term is. You are required to do the calculation of the present value of the annuity.

(Total 15 Marks)

2. A company produces three brands of smart phones under a single plant. They are: Galaxy, Ninki Cavor. The company has prepared the budget for the year 2023 follows:

	Galaxy	Ninki	Cavor
Unit Sales	40	100	60
Unit Selling Price (Rs)	84,000	108,000	144,000
Variable Manufacturing Cost per unit (Rs)	39,600	36,000	68,400
Variable selling Cost per unit (Rs)	15,000	12,600	18,000

Fixed manufacturing overhead is budgeted at Rs.6,000,000, and the company's fixed selling and administrative expenses are forecasted to be Rs.975,000. Company's tax rate is 30 percent.

Required:

- (a) Find out Company's budgeted net income after tax for the year 2023.
- (b) Calculate the Overall Contribution to Sales ratio.
- (c) What is the overall Break-Even Point (in rupees) of the company?
- (d) Assuming the sale mix remains as budgeted, determine how many units of each product (State in real nearest whole number) the company must sell in order to break even in the year 2023.
- (e) If the company reduces the C/S ratio of Galaxy phone to 0.50 with the same amounts of variable costs what would be its selling price?

(Total 15 Marks)

3. The board of directors of GSP plc is considering the installing a new manufacturing plant in its factory. The company has an option of choosing a plant out of two types of plants. The purchase price of the Plant A is Rs.1000,000 and installation will cost Rs.200,000. The plant would be usable for 5 years. The purchase price of the Plant B is Rs.1200,000 and installation will cost Rs.100,000. The plant would be usable for 4 years. The board hired a consultant, who estimated the net cash inflow of Rs.324,684 from Plant A each for the five years. He also estimated the annual net cash inflow of Rs.428,012 from Plant B for the four years. The Company's cost of capital is 10 percent for this project.

Required:

- Calculate the Net Present Value (NPV) of both Plants. Which plant shall the board approve for the project based on the NPV?
- Calculate the Internal Rate of Return (IRR) of both Plants. Which plant should the board approve for the project based on the IRR?
- Are the results consistent between NPV and IRR rules?

(15 Marks)

4. KMP Plc is a consumer goods manufacturing company. It is considering a proposal for marketing a new food product. The project will require an investment of Rs.1000,000 in plant and machinery. It is estimated that the machinery can be sold for Rs.120,000 at the end of its economic life of 5 years. Assume that the profit or loss on the sale of the machine is subject to the corporate tax. The company can charge annual depreciation charged at 20 percent on straight line method assuming zero scrap value for the purpose of tax computation and book loss or gain on sale of the asset is subject to the taxes. Assume that the company's tax rate is 25 percent. The data for determining the project's net cash flows are:

	Rs.000					
Year	0	1	2	3	4	5
Initial Investment	-1000	-	-	-	-	-
Net Working Capital	-50	70	60	75	90	0
Salvage Value	-	-	-	-	-	120
Revenues	-	500	950	1850	2000	1750
Expenses	-	300	470	960	1200	850

Required:

Calculate the Profit After Tax and Cash Flow Estimates for the New Product.

(Total 15 Marks)