LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Com. DEGREE EXAMINATION – **HONOURS**

FOURTH SEMESTER – **APRIL 2023**

UBH 4502 – FINANCIAL MANAGEMENT

Date: 08-05-2023 Dept. No. Max. : 100 Marks

Time: 09:00 AM - 12:00 NOON

PART-A

Answer all the questions **15*2=30**

1. A company has a real cost of capital of 12% per year. The general rate of inflation is currently estimated at 5% per year. **What is the nominal cost of capital**?

2. An investment has the following cash pattern with a cost of capital as 12%

Year	Cash Flow
0	(50000)
1	8000
2	12000
3	20000
4	28000
5	17000

Find the discounted payback in years(with 2 decimal places)?

3. Roger Ltd is contemplating purchasing for $180,000 a machine that will be used to produce 40,000 units of a product per year for four years. These products will be sold for $9 each and unit variable costs are expected to be $5. Incremental fixed costs will be $80,000 per year for production costs S Ltd has a required return of 5% per year. **By how many units must the estimate of production and sales volume fall for the project to be regarded as not worthwhile?**

4. ABC Ltd has five independent projects available

Projects	Initial Outlay	NPV
A	15000	35000
B	13000	30000
C	17000	35000
D	21000	41000
E	18000	34000

If the company has $40,000 to invest at time 0, and each project is infinitely divisible, but none can be delayed, what is the maximum NPV that can be earned?

5. A company undertakes a project that involves purchasing machinery at a cost of $35,000. The machinery is used on the project for five years, generating operating cash inflows of $22,000 per year. It is sold at the end of the project for $15,000. Taxation is charged at a rate of 30%. **Calculate the return on capital employed (ROCE) for the project, to the nearest whole percentage based on average investment**

6. A company issued its 11% irredeemable loan notes at 96. The current market price is 90. The company is paying corporation tax at a rate of 20%. **What is the current net cost of capital per year of these loan notes (to one decimal place)**
7. A company has just declared an ordinary dividend of 35.6p per share; the cum-div market price of an ordinary share is 290p. **Assuming a dividend growth rate of 15% per year, what is the company's cost of equity capital (to one decimal place)?**
8. H Co's share price is $3.50 at the end of 2011 and this includes a capital gain of $0.75 since the beginning of the period. A dividend of $0.25 has been paid for 2011 **What is the total shareholder return for the year 2011 in %?**
9. A listed company has a dividend yield of 8%, based on its most recent dividend of $0.35 per share. What is the value of the share price in relation to these values?
   What is the value of the share price in relation to these values (in cents, to the nearest whole cent)?
10. Compton Co has announced a 1 for 4 rights issue at a subscription price of $2.50. The current cum-rights price of the shares is $4.10. **What is the new ex-rights market value of the shares?**
11. **Which TWO of the following are 'efficiency' targets that a not-for-profit organization might put in place?**
    A Reduction of wastage of paper
    B Pay rates for staff of appropriate levels of qualification
    C Staff utilization
    D Customer satisfaction ratings
12. There are two main types of financial market: capital and money markets, and within each of these are primary and secondary markets.
    Which TWO of the following statements are true?
    Primary markets allow the realization of investments before their maturity date by selling them to other investors
    B Primary markets deal in new issues of loanable funds
    C Capital markets consist of stock markets for shares and loan bond markets
    D Money markets provide long-term debt finance and investment
13. A company is preparing its cash flow forecast for the next financial period.
    Which THREE of the following items should be included in the calculations?
    A A corporation tax payment
    B A dividend receipt from a short-term investment
    C The loss made on the disposal of an item of machinery
    D A bad debt written off
    E An increase in a provision
    F The receipt of funding for the purchase of a new vehicle
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15. **Which of the following is an advantage of implementing just-in-time inventory management?**
    A Quality control costs will be eliminated
    B Monthly finance costs incurred in holding inventory will be kept constant
    C The frequency of raw material deliveries is reduced
    D The amount of obsolete inventory will be minimized

PART-B

Answer all the questions **3*10=30**

16. Geon Ltd is considering 2 capital expenditure proposals. Both proposals are similar and operate for four years. Only 1 can be accepted. The following information is available

	Profit/loss	
	Proposal A	Proposal B

Initial Investment	46000	4 6000
Year 1	6500	4500
Year 2	3500	2500
Year 2	13500	4500
Year 4	-1500	14500
Scrap at end of year 4	4000	4000

Depreciation is charged on straight-line basis

a) **What is the annual cash flow for year 4 for proposal A**
b) **What is the payback period for Proposal A**
c) **What is the payback period for Proposal B**
d) **What is the ROCE based on average investment for Proposal A**
e) **What is the ROCE based on average investment for Proposal B**

17. Sonic Co has 8 million 50c ordinary shares in issue with a current price of 150c ex-div. An annual dividend of 20c has been paid. The past 4 dividends (starting from latest) are 20,18, 15 and 14. year. The company's other major source of funds is 4$ million 6% redeemable loan notes in 5 years with a market value of $101 per $100 nominal value, redeemable at 130$ Corporate tax is 30%

The risk free rate is 10% and Beta equity for Sonic is 1.2. The average equity risk premium is 5%

a) **Find the growth rate of dividends**
b) **Find the cost of equity through dividend growth model**
c) **Find the cost of equity through CAPM model**
d) **Find the post tax cost of debt**
e) **Find the WACC of Sonic Co using CAPM model for cost of equity**

18. Green Co is a furniture manufacturer whose auditors have pointed out that its working capital position is far from satisfactory. The main problem is the high level of inventory, which has led to the company building up a larger and larger bank overdraft. Managers at Green Co have been to numerous public lectures discussing various types of inventory control systems and technologies, but have felt that most of them are impractical.

(a) Indicate, by clicking in the relevant boxes, whether the following are or are not assumptions behind the traditional economic order quantity formula,

Statement	**Is an assumption**	**Is not an assumption**
Constant demand		
Zero lead time		

(b) The production manager has established the following information about a major inventory item.

Purchase price per unit	$480
Annual demand	4,000
Supplier’s delivery costs per order	$10
Chief buyer’s salary per year	$30,000
Total number of orders placed per year*	1,000
Annual storage costs per unit	$2
Cost of capital 10% per year	

*Relates to all product lines, not just this one.

What is the economic order quantity for this inventory item? ________units

(c) Assume that Green Co adopts the EOQ as its order quantity for that item of inventory and that it takes one week for an order to be delivered. How much inventory will Green Co have on hand when the order is placed? Assume there are 52 weeks in a year. __________units

(d) The following statements refer to different types of inventory control systems and procedures.

1 A just-in time system implies relatively low reorder costs.
2 Periodic review means ordering inventory when it falls below the designated safety inventory level.
3 Use of the economic order quantity model means that holding and ordering costs should be the same.

Which of the above statements is/are correct?

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

(e) The following possible benefits have been attributed to just-in-time systems.

1 Reduced inventory levels

2 Less waste

3 Reduced production times

4 Improved quality of output

Which of these claims can be justified?

A 1 only B 1 and 2 C 1, 2 and 3 D 1, 2, 3 and 4

PART- C

Answer all the questions **2 x20 = 40**

19. The equity beta of Fence Co is 0.9 and the company has issued 10 million ordinary shares. The market value of each ordinary share is $7.50. The company is also financed by 7% bonds with a nominal value of $100 per bond, which will be redeemed in 7 years' time at nominal value. The bonds have a total nominal value of $14m. Interest on the bonds has just been paid and the current market value of each bond is $107.14.
Fence Co plans to invest in a project which is different to its existing business operations and has identified a company in the same business area as the project, Hex Co. The equity beta of Hex Co is 1.2 and the company has an equity market value of $54m. The market value of the debt of Hex Co is $12m.
The risk-free rate of return is 4% per year and the average return on the stock market is 11% per year. Both companies pay corporation tax at a rate of 20% per year.
Required
(a) Calculate the current weighted average cost of capital of Fence Co. (12 marks)
(b) Calculate a cost of equity which could be used in appraising the new project. (4 marks)
(c) Explain the difference between systematic and unsystematic risk in relation to portfolio theory and the capital asset pricing model. (4 marks)

20. Charm Inc., a software company, has developed a new game, ‘Fingo’, which it plans to launch in the near future. Sales of the new game are expected to be very strong, following a favorable review by a popular PC magazine. Charm Inc. has been informed that the review will give the game a ‘Best Buy’ recommendation. Sales volumes, production volumes and selling prices for ‘Fingo’ over its four-year life are expected to be as follows:

Year	1	2	3	4
Sales and production (units)	150,000	70,000 60,000	60,000	
Selling price ($ per game)	$25	$24	$23	$22

Financial information on ‘Fingo’ for the first year of production is as follows:

Direct material cost $5.40 per game

Other variable production cost $6.00 per game

Fixed costs $4.00 per game

Advertising costs to stimulate demand are expected to be $650,000 in the first year of production and $100,000 in the second year of production. No advertising costs are expected in the third and fourth years of production. Fixed costs represent incremental cash fixed production overheads. ‘Fingo’ will be produced on a new production machine costing $800,000. Tax allowable depreciation will be claimed on a reducing balance basis at a rate of 25%. The machine will have a useful life of four years at the end of which no scrap value is expected.Charm Inc. pays tax on profit at a rate of 30% per year and tax liabilities are settled in the year in which they arise. Charm Inc. uses an after-tax discount rate of 10% when appraising new capital investments. Ignore inflation.

Required:

(a) Calculate the net present value of the proposed investment and comment on your findings. (15 marks)

(b) Discuss the reasons why the net present value investment appraisal method is preferred to other investment appraisal methods such as payback, return on capital employed and internal rate of return.

(5 marks)

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