STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 600 086.
(For candidates admitted during the academic year 2020–2021 and thereafter)

B.COM. DEGREE EXAMINATION NOVEMBER 2023
HONOURS
THIRD SEMESTER

COURSE	**:**	**MAJOR – CORE**
PAPER	**:**	**FINANCIAL MANAGEMENT**
SUBJECT CODE	**:**	**20BH/MC/FM34**
TIME	**:**	**3 HOURS**

MAX. MARKS: 100

SECTION – A

ANSWER ALL QUESTIONS: **(10 x 2 = 20)**

1. Elaborate on the concept of 'overcapitalisation' in working capital management.
2. Explain any two sources of business risk.
3. Evaluate the investment opportunity using certainty equivalents.
4. Explain the concept of the Liquidity Preference Theory in the context of the yield curve.
5. What do you mean by venture capital?
6. If, for a given level of activity, a firm's ratio of fixed costs to variable costs were to increase and, at the same time, its ratio of debt to equity were also to fall, what would be the effect on the firm's financial and operating risk?
7. Calculate the expected return for a stock given the following information: the risk-free rate is 3%, the expected market return is 10%, and the stock has a beta of 1.2.
8. There is a new investment opportunity with the following cashflows and certainty equivalent %:

	Y0	Y1	Y2	Y3	Y4
Expected cashflows	(30,000)	13,000	24,000	22,000	18,000
Certainty equivalent %		70%	55%	35%	25%

The company's cost of capital is 15%. The risk-free rate is 4%.
Evaluate the investment opportunity using certainty equivalents.

9. With the current spot rate at \$1.4010 - \$1.4025 = £1 for US dollars against UK sterling and a two-month forward rate quoted as \$1.3880 - \$1.3995 = £1, an exporter based in the UK anticipates receiving \$250,000 in two months.
If the exporter opts for a forward exchange contract, what will be the equivalent amount received in UK sterling?

10. An investor deposits Rs. 100 in a bank account for 5 years @ 8%. Find out the amount if the interest is compounded quarterly.

SECTION – B

ANSWER ANY FIVE QUESTIONS: **(5 x 8 = 40)**

11. Explain the objectives of financial management.
12. Discuss the following techniques of hedging interest rate risks:
    a. Forward Rate Agreement
    b. Asset and Liability Management
    c. Interest Rate Options
    d. Interest Rate Swaps

13. The following information is available regarding SunGlo Co and MoonRise Co:
    a. SunGlo Co maintains a minimum cash balance of $17,500, and the cost of transferring money to or from the bank is $45 per transaction. An analysis of daily cash flows over the past year reveals that the standard deviation is $3,500 per day. The interest rate is 0.04% per day.
    Calculate the following using the Miller-Orr's Cash Management Model:
        i. Determine the spread between the upper and lower limits.
        ii. Find the upper limit.
        iii. Identify the return point.
    b. MoonRise Co experiences a constant monthly cash demand of $55,000. To replenish its current account, which does not earn interest, it sells a consistent amount of treasury bills, serving as an investment with a 6% annual return. The cost per sale of treasury bills is a fixed $15 per transaction.
    What is the optimal amount of treasury bills to be sold each time cash needs to be injected into the current account using the Baumol's Cash Management Model?

14. The following is the financial statements of RYC Co for the year ended 31-March-20X3

Statement of profit or loss	in $
Sales revenue	50,000
Cost of goods sold	30,000
Gross profit	20,000
Administration costs	14,000
Profit before interest and tax	6,000
Interest	300
Profit before tax	5,700
Taxation at 30%	1,710
Profit after tax	3,990

Changes in equity	in $
Dividends	2,394
Net change in equity (retained profits)	1,596

Statement of financial position	in $
Net non-current assets	20,100
Net current assets	4,960
	25,060
Ordinary shares, nominal value 25¢	2,500
Retained profit	20,060
12% loan stock (redeemable in six years)	2,500
	25,060

Variable cost of goods sold makes up 85% of cost of goods sold.
Required: Compute the following ratios for the company:
    a. Financial gearing
        i. Using equity gearing
        ii. Using Capital (total) gearing
    b. Operational gearing
        i. Using fixed costs/total costs
        ii. Using contribution/PBIT
    c. Interest gearing and
    d. Earnings per share.

15. A company is planning to invest in a project with the following cashflows

Year	in $'000s
0	(500)
1	120
2	220
3	180
4	160
5	140

The cost of capital of the company is 9%
Required: Compute the payback period, discounted payback period, NPV and IRR for the project.
Note: For IRR computation, use 9% and 20% discount rates.

16. Sunny Co has been offered a discount of 2.7% for an early settlement by a major supplier from which it purchases goods worth $6,000,000 each year. Sunny's normal payment term are 30 days; early settlement requires the payment to be made within 10 days. Currently Sunny has an overdraft on which it is paying 10% interest. What is the net benefit of accepting the early settlement discount (assuming 365 days a year)?

17. Compute operating cycle:

Period covered	365 days
Average period of credit allowed by suppliers	20 days
Average debtors o/s	500
Raw material consumption	5500
Total production cost	10000
Total cost of sales	10500
Sales	17000
Value of average cost maintained:	
Raw material	380
Work in progress	350
Finished goods	290

SECTION – C

ANSWER ANY TWO QUESTIONS: (2 x 20 = 40)

18. The CFO of XYZ Inc is exploring options to enhance the company's market value by reducing its weighted average cost of capital.
XYZ Inc is a publicly traded company with 80 million shares outstanding, and the current ex-dividend price per ordinary share stands at $4.53.
The historical dividend payouts per share for XYZ Inc are as follows:

Year	2019	2020	2021	2022	2023
Dividend per share (cents)	33.50	34.75	35.90	37.30	39.20

Additionally, XYZ Inc has debentures in circulation with a book value of $100 million, and their current ex-interest market price is $115 per $100 debenture. The company's existing after-tax cost of debt is 6%, and the tax rate is 25%.

To reduce the weighted average cost of capital and subsequently boost the market value of XYZ Inc, the CFO suggests issuing \$150 million in bonds at their par value of \$100 per bond. These bonds will carry an 10% annual interest rate before taxes and will be redeemed at a 4% premium to par value after 4 years.

Required:

Calculate the market value of the after-tax weighted average cost of capital for XYZ Inc in the following two scenarios and comment on your findings:

a. before the issue of the new bonds and
b. after the issue of the new bonds.

Note: To compute the post-tax cost of bonds, use 5% and 10% discount rates.

19. InnoTech Systems has recognized the need to increase its manufacturing capacity to cater to the growing demand for a cutting-edge product, codenamed "TechGen-X." This new product cannot be produced using the company's existing equipment. The management has identified a specialized machine capable of manufacturing TechGen-X at a rate of 65,000 units per year. The machine acquisition cost is \$280,000, and it is expected to have a useful life of four years with no residual value.

 InnoTech Systems anticipates that the initial demand for TechGen-X will be 35,000 units in the first year, with a yearly increase of 10,000 units thereafter. The estimated selling price per unit is \$12.00, and the expected production cost is \$8.20 per unit. Additional fixed production overheads of \$50,000 per year will be incurred. All financial figures are expressed in current price terms.

 The company predicts the following annual inflation rates:

 - Selling price of TechGen-X: 3% per year
 - Production cost: 3% per year
 - Fixed production overheads: 5% per year

 InnoTech Systems applies a nominal (money) cost of capital of 10% for investment evaluations. The company operates with a tax policy that involves paying taxes one year in arrears, subject to a 25% reducing balance basis for tax-allowable depreciation, with a balancing allowance at the end of the machine's life.

 Required:

 Compute the net present value (NPV) of the incremental cash flows stemming from the acquisition of the new machine and provide recommendations regarding its procurement.

20. (a) A Company currently expects sales of \$30,000 a month. Variable costs of sales are \$20,000 a month (all payable in the month of sale). It is estimated that if the credit period allowed to customers was to be increased from 30 days to 60 days, sales volume would increase by 20%. All customers would be expected to take advantage of the extended credit. The cost of capital is 12% a year.

 Required: Evaluate whether the extension of the credit period is justifiable in financial terms.

 (b) A company with sales of \$240 million per year has an average collection period of 3 months, bad debts are 2%. A factoring company will provide non-recourse factoring fee of 5% of revenue. As a result of this, administration savings will be made of \$8 million per year and the credit period allowed will fall to two months. The factor will advance 75% of the value of invoices in cash for the duration of the credit period. The interest rate on these advances is 13%. Cost of borrowing is 10%. Assess whether the factor should be used.

21. **Case Study (Compulsory)**

Maverick Electronics is a well-established distributor business specializing in high-end consumer electronics where they buy the products from the manufacturers and sell it to the retailers. They are preparing a cash budget for the last four months of 20X3.
Maverick Electronics anticipates strong sales for high-end electronics in the coming months.

	July	August	September	October	November	December	January
Number of units sold	190	205	220	240	265	270	290

Each of the unit is sold at an average price of $900 per unit. The company offers a payment structure where 60% of the sales revenue is collected in the month following month of sale from one set of customers, and the remaining 40% is received in the second month after sale from another set of customers. To incentivize early payment from customers paying after two months, Maverick Electronics extends a 2% discount, and it's used by 25% of that category of credit customers who will make the payment immediately.
To maintain a healthy inventory level, Maverick Electronics purchases 70% of the inventory in the month before the sale and the remaining 30% in the same month as the sale. Payment for the inventory is made in the same month as purchase and each inventory has an average price of $550.
Maverick Electronics has consistent monthly operating expenses, covering rent, utilities, and employee wages. These expenses total $10,000 per month.
In October, Maverick Electronics has planned a capital investment of $30,000 for fixtures and equipment to enhance their distribution service.
The company has a current loan with a principal amount of $250,000 where the principal is repayable at the end of 20X6. Interest accrues at an annual rate of 6%, and this interest is due quarterly. The interest payment is made in September and December.
Maverick Electronics has an outstanding tax liability of $50,000, which is scheduled to be paid in December.
At the start of September 20X3, the cash balance is expected to be $5,000.
Required: You are requested to create a monthly cash budget for the period spanning from September to December 20X3. This budget should provide a transparent breakdown of all incoming and outgoing cash transactions, along with the starting and ending cash balances for each month.

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