STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 86
(For candidates admitted from the academic year 2023 – 2024)

B.COM. DEGREE EXAMINATION – APRIL 2026
HONOURS
SIXTH SEMESTER

COURSE : MAJOR CORE
PAPER : BUSINESS VALUATION AND RESTRUCTURING
SUBJECT CODE : 23BH/MC/BV65
TIME : 3 HOURS MAX. MARKS: 100

Q. No.	SECTION A Answer all questions: (5 x 2 =10)	CO	KL
1.	A company is expected to receive $10,000 in 3 years' time. The discount rate is 8% per annum. Calculate the present value of this amount.	1	1
2.	State the difference between merger and acquisition.	1	1
3.	Explain the difference between company voluntary arrangement and administration order.	1	1
4.	State any two cash flows associated with leasing the asset.	1	1
5.	What is Sale and Lease Back?	1	1
Q. No.	**SECTION B Answer any four questions: (4 x 5 = 20)**	**CO**	**KL**
6.	Zen Tech Ltd has just paid a dividend of $2.40 per share. Dividends are expected to grow at a constant rate of 5% per annum. The company's beta is 1.3. The risk-free rate is 4% and the market return is 10%. Zen Tech Ltd has 8 million shares in issue. **Required:** a) Using the Capital Asset Pricing Model (CAPM), calculate the cost of equity. b) Using the Dividend Valuation Model (constant growth model), calculate the total market value of the company's equity.	2	2
7.	Identify whether each scenario represents revenue synergy, cost synergy, or financial synergy. a) After acquiring a smaller seafood brand, Ocean Fresh Ltd increases annual sales from $50 million to $65 million because it can now sell the acquired company's products through its existing global distribution network. No major cost savings are expected. b) Following a merger between two logistics companies, overlapping warehouse facilities are closed. Annual operating costs fall from $18 million to $14 million due to reduced staff and rental expenses. c) A company with strong cash reserves acquires a highly leveraged business. After the acquisition, the combined company refinances debt at a lower interest rate, reducing annual interest payments from $6 million to $4 million. d) Two technology firms merge and combine their research teams. As a result, they avoid duplicate R&D spending of $3 million per year while maintaining the same level of innovation output. e) After acquiring a competitor, a company bundles products together and increases its average selling price. Combined annual revenue increases from $120 million to $140 million, while costs remain unchanged.	2	2

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8.	Velocity Motors Ltd is considering investing in a new electric vehicle battery plant. The project requires an initial investment of $10 million. The expected present value of future cash inflows is $9 million, resulting in a negative NPV of $1 million. However, management has the flexibility to abandon the project after one year if demand conditions weaken. If abandoned, the plant could be sold for $11 million at that time. Additional information: • Current value of the underlying project = $9 million • Exercise price = $11 million • Risk-free rate = 5% (continuous compounding) • Time to decision = 1 year • The value of a call option on the project is $0.5 million **Required:** Using put–call parity, calculate the value of the abandonment (put) option, determine the revised project NPV after including this option, and advise whether Velocity Motors Ltd should proceed with the investment. *Note: use the following formula* $P = C - P_a + P_e e^{-rt}$	2	2
9.	Define unbundling and state any two advantages and disadvantages of unbundling.	2	2
10.	A food processing company is considering leasing a packaging machine for its factory. The machine can be leased for 3 years at a rental of $50,000 per year, payable at the end of each year. Lease payments are tax deductible. Corporate tax is 20%, payable one year in arrears. The company's cost of borrowing is 8%. **Required:** Calculate the net present value (NPV) of the leasing option.	2	2
11.	Briefly explain any two types of international sources of finance.	2	2
	SECTION C		
Q. No.	**Answer ALL questions: (4 × 10 = 40)**	**CO**	**KL**
12.	A) Alpha Manufacturing Ltd has provided the following financial information for the most recent year: Income Statement Extract:		

Income Statement Extract:	
Revenue	$25,000,000
Cost of sales	$15,000,000
Gross profit	$10,000,000
Operating expenses (excluding depreciation)	$4,200,000
Depreciation	$800,000
EBIT	$5,000,000
Interest expense	$600,000
Profit before tax	$4,400,000
Tax (30%)	$1,320,000
Net income	$3,200,000

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Statement of Financial Position Extract:	
Increase in accounts receivable	$300,000
Increase in inventory	$250,000
Increase in accounts payable	$150,000
Increase in working capital (overall)	$400,000
Capital expenditure during the year	$1,200,000
Net borrowing during the year	$500,000
Dividends paid	$1,000,000
Cash balance at year end	$2,500,000

Additional information:

- Weighted Average Cost of Capital (WACC): 10%
- Expected long-term growth rate (g): 4%

Required:

a) Calculate the Free Cash Flow to the Firm (FCFF).

b) Calculate the Free Cash Flow to Equity (FCFE).

c) Using the constant growth valuation model, calculate the total value of the firm.

**Assume that the FCFF calculated in part (a) represents* $FCFF_1$.

OR

B) Coral Wave plc is an all-equity financed company with 12 million shares in issue. Its current share price is $60 per share. Coral Wave plc is considering acquiring Tide Harvest Ltd, a company operating in the same sector.

Tide Harvest Ltd is also all-equity financed and has 6 million shares in issue. Its current share price is $40 per share. The acquisition is expected to generate synergy gains with a total present value of $18 million.

Financial advisers to Coral Wave plc have indicated that an offer at a 30% premium to the current market price of Tide Harvest Ltd would be acceptable to its shareholders.

Required:

(a) If Coral AWave plc has sufficient cash available to finance the acquisition, calculate the total value of Coral Wave plc after the takeover and the value per share.

(b) If Coral Wave plc makes a share-for-share exchange offer for the shares in Tide Harvest Ltd, calculate the total value of Coral Wave plc after the takeover and the value per share.

13.	A) Discuss the structure, key assumptions and limitations of the Black-Scholes Option Pricing (BSOP) Model. **OR** B)Discuss various long-term sources of finance available to a company, highlighting their features and the method of raising long term finance.	3	3

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14.	A) Style Sphere Group plc is a diversified retail company operating in electronics, home décor and fashion. Due to declining margins and increased competition in the fashion segment, the board of directors is considering selling its fashion unit. The directors are exploring different restructuring and sale options but are unfamiliar with the various forms of management-led and ownership-based buy-outs. They have asked you, as a financial adviser, to explain the possible alternatives available before making a decision. Specifically, they would like to understand how the following options differ and how each structure works in practice: • Management Buy-Out (MBO) • Leveraged Buy-Out (LBO) • Employee Buy-Out (EBO) • Management Buy-In (MBI) • Spin-Out **Required:** Explain the five terms listed above in the context of Style Sphere Group's proposed sale of its fashion unit. **(OR)** B) Adventure World Theme Park is planning to introduce a new high-speed roller coaster to attract more visitors during peak seasons. Management is evaluating whether the ride should be purchased outright or leased from a specialist amusement ride provider. If the roller coaster is purchased outright, it will cost $3,500,000, payable immediately. The ride is expected to have a useful life of 5 years, after which it can be sold for an estimated $600,000. If purchased, annual maintenance and safety inspection costs of $150,000 per year will be payable at the end of each year. Tax-allowable depreciation will be charged on a straight-line basis over the life of the asset. Alternatively, the roller coaster can be leased for 5 years at a rental of $850,000 per annum, payable in advance. Corporate tax is 25%, payable one year in arrears on taxable operating cash flows The relevant cost of capital for the theme park is 10%. **Required:** Advise Adventure World Theme Park on whether it should lease or purchase the roller coaster. *Use the formulas below* *If cashflows are payable in advance use the formula below:* Annuity Due Factor = Annuity factor × (1 + r)	4	4
15.	A) Explain the following valuation models used in corporate finance: a) Asset-Based Valuation Model b) Income-Based Valuation Model c) Free Cash Flow (DCF) Model Discuss their assumptions, applicability and limitations. Also compare which model is more suitable for a growth-oriented company. **OR** B) Explain the various methods and models of Business Valuation.	4	4

Q. No.	SECTION D Answer ANY ONE question: (1 × 15 = 15)	CO	KL
16.	Nova Industries is considering making a bid for the entire equity share capital of Orion Ltd. Orion Ltd currently has a P/E ratio of 8 and annual earnings of $450 million. Nova Industries has a P/E ratio of 14 and annual earnings of $840 million. It is estimated that annual post-tax synergy benefits of $160 million will arise as a result of the acquisition. The P/E ratio of the combined company is expected to be 13. **Required:** (a) Calculate: • The minimum value acceptable to Orion Ltd's shareholders, and • The maximum amount Nova Industries should be willing to pay for Orion Ltd. (b) Discuss the advantages and disadvantages of using a cash consideration compared with a share-for-share exchange when financing the acquisition.	5	5
17.	Summit National Bank is evaluating a new digital lending platform project. Management has the option to invest in the platform within one year. The project can be viewed as a call option, where the underlying asset is the present value of expected project cash inflows. The following information is available: • Current value of the underlying project (P_a) = $50 million • Exercise price (P_e) = $55 million • Risk-free rate (r) = 4% per annum (continuous compounding) • Time to maturity (t) = 1 year • Volatility of project returns (s) = 30% per annum Summit National Bank will use the Black–Scholes option pricing model: $c = P_a N(d_1) - P_e e^{-rt} N(d_2)$ Where: $d_1 = [\ln(P_a / P_e) + (r + 0.5s^2)t] / (s\sqrt{t})$ $d_2 = d_1 - s\sqrt{t}$ **Required:** **(a)** Distinguish clearly between a call option and a put option. **(b)** Using the Black–Scholes model and the Z table, calculate the value of the call option on the digital lending platform project. Show all workings.	5	5

Q. No.	SECTION E Compulsory Case study: (1 × 15 = 15)	CO	KL
18.	Blue Wave Marine plc is a long-established company operating in the commercial fishing and seafood distribution industry. The company has traditionally focused on large-scale trawling operations and cold-chain logistics across several coastal regions. In recent years, increasing environmental regulation and pressure from international buyers have encouraged the board to consider more sustainable and technology-driven solutions. The directors are currently evaluating a new project involving the development of AI-powered smart net systems designed to reduce by-catch, improve fuel efficiency and provide real-time data analytics to vessel operators. Management believes this innovation could significantly enhance long-term competitiveness and reposition Blue Wave Marine as a leader in sustainable fishing technology. However, the project represents a move into a higher-technology sector that carries different business risk from the company's existing fishing operations. Blue Wave Marine currently has an equity beta of 1.1. Its market value of equity is $300 million and its market value of debt is $200 million. The company's finance team has noted that its current gearing ratio has remained broadly stable for several years, and its weighted average cost of capital is regularly reviewed by the board when evaluating traditional expansion projects. As BlueWave Marine does not currently operate in marine technology, it has identified Ocean Tech Solutions Ltd, a listed company specialising entirely in advanced fishing technologies, as a suitable comparator. Ocean Tech Solutions has an equity beta of 1.4. Its market value of equity is $200 million and its market value of debt is $100 million. The corporate tax ratsse applicable to both companies is 30%. For the proposed smart net project, BlueWave Marine intends to finance the investment using a capital structure of 50% equity and 50% debt. The finance director has stated that this structure reflects the company's target gearing level for new strategic technology investments, even though it differs from the company's existing capital structure. The current risk-free rate is 4% and the expected return on the market portfolio is 10%. The board is concerned that simply applying BlueWave Marine's existing cost of equity would not accurately reflect the systematic risk of the new technology project. You have been asked to advise on the appropriate project-specific cost of equity. **Required:** Calculate the appropriate cost of equity for the new AI-powered smart net project. *Your answer must clearly show all stages of calculation.*	5	6

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