

FINAL EXAMINATION

June 2026

P-20A(SPMBV)

Syllabus 2022

**STRATEGIC PERFORMANCE MANAGEMENT AND
BUSINESS VALUATION**

Time Allowed: 3 Hours

Full Marks: 100

The figures in the margin on the right side indicate full marks.

*All sections are compulsory. Each section contains instructions regarding the
number of questions to be answered within the section*

All workings must form part of the answer

*Wherever considered necessary, suitable assumptions may be made and
clearly indicated in the respective answer.*

SECTION-A

Answer Question No.1 which is compulsory.

1. Choose the correct answer from the given alternatives:

2×10=20

- (i) _____ refers to systemized reduction of time within the production cycle including response times of suppliers and customers.
- (A) Lean System Management
 - (B) Lean Manufacturing
 - (C) Benchmarking
 - (D) Six Sigma
- (ii) Six Sigma is a business-driven, multi-dimensional structured approach to _____.
- (A) Reducing process variability
 - (B) Lowering Defects
 - (C) Improving Processes
 - (D) All of the above
- (iii) In order to maximize profits, a firm should produce at the output level for which:
- (A) Average cost is minimized
 - (B) Marginal revenue equals marginal cost
 - (C) Marginal cost is minimized
 - (D) Price minus average cost is as large as possible

- (iv) The goal of ERM as provided in Committee of Sponsoring Organisation's (COSO) ERM – Integrated Framework is to provide companies with _____.
- (A) Key principles and concepts
 - (B) Common language
 - (C) Clear direction and guidance regarding the management enterprise
 - (D) All of the above
- (v) Market value Added (MVA) is the difference between the current market value of a firm and the _____.
- (A) Net Worth of the Company
 - (B) Total Value of the Assets of the Company
 - (C) Capital Employed in the Company
 - (D) Total Outsider's Liabilities of the Company
- (vi) Key inputs of Discounted Cash Flow (DCF) Method are _____.
- (A) Cashflow
 - (B) Terminal Value
 - (C) Discount Rate
 - (D) All of the above
- (vii) The rate of return required by the bond holders from the bond is known as the _____.
- (A) Bond Price
 - (B) Call Option
 - (C) Bond Yield
 - (D) Coupon
- (viii) Which is not a human-capital related intangible asset?
- (A) Trained workforce
 - (B) Employment agreements
 - (C) Union Contracts
 - (D) Design patent

- (ix) Synergy expected from merger = ₹40 crore, price paid = ₹360 crore, target value = ₹320 crore. Acquirer's gain = ?
- (A) ₹0 crore
(B) ₹5 crore
(C) ₹10 crore
(D) ₹15 crore
- (x) Under the market approach, a firm with EPS ₹25 and industry P/E of 15 would have an estimated equity value of:
- (A) ₹ 200
(B) ₹ 375
(C) ₹167
(D) ₹ 60

(b) Read the following scenario and answer the following questions:

Zenith Pharmaceuticals Ltd. is a mid-sized pharmaceutical firm with 3 strategic business units (SBUs):

- Formulations Division (FD)
- Active Pharmaceutical Ingredients (API) Division
- Research & Development (R&D) Division

Management introduced a Balanced Scorecard (BSC) framework aligned with their cost leadership and innovation strategies. Key metrics and data from the latest fiscal year are as follows:

Division	Operating Profit (₹ lakhs)	Capital Employed (₹ lakhs)	WACC (%)	Customer satisfaction (out of 100)	Employee training hours / year
FD	1,800	9,000	12	86	22
API	1,400	7,000	11	78	18
R&D	-300	5,000	14	90	50

Additional Info:

- The firm uses EVA, Residual Income, and BSC perspectives to evaluate performance.
- Industry benchmark ROI for similar divisions is 18%.
- R&D division is not expected to generate immediate profits; its performance is assessed using non-financial indicators and value creation potential.

Answer the following questions based on the above scenario and choose the correct answer from given four alternatives. **2×5=10**

- (xi) What is the EVA of the API Division?
- (A) ₹630 lakhs
 - (B) ₹1,400 lakhs
 - (C) ₹620 lakhs
 - (D) ₹1,330 lakhs
- (xii) Which divisions have outperformed the industry benchmark ROI of 18%?
- (A) FD and R&D
 - (B) API and R&D
 - (C) FD& API
 - (D) API
- (xiii) Based on Balanced Scorecard's Learning & Growth perspective, which division is performing best?
- (A) RD
 - (B) API
 - (C) FD
 - (D) All are performing at the same level
- (xiv) If Asterix plans to benchmark non-financial performance, which combination of metrics below would be MOST appropriate for the R&D division?
- (A) Operating profit, ROI
 - (B) Capital Employed, WACC
 - (C) EVA, Training hours
 - (D) Customer Satisfaction, Employee Training Hours
- (xv) What strategic insight does the negative EVA and ROI of the R&D division provide in the context of long-term strategic performance management?
- (A) R&D should be shut down due to poor returns.
 - (B) Financial metrics alone are insufficient to evaluate R&D
 - (C) R&D is underperforming due to capital misallocation
 - (D) EVA is not applicable for R&D

Section – B**Business Valuation**

Answer any five questions from Question No.2 to Question No.8 in Section B.

Each question carries 14 marks

14×5=70

2. (a) **Briefly** define Customer Relationship Management (CRM) and state its primary objective in a business context. **Explain** the five misrepresentations of CRM. 7
- (b) A manufacturing company, Prime Auto Components Ltd., is facing frequent production delays, poor workplace organization, rising defects, low employee morale, and reduced equipment availability. The management believes that Lean manufacturing is only about waste reduction and has little wider relevance. The Cost Accountant has suggested implementation of the 5S technique of Lean to improve visual control, workplace discipline, and production efficiency.

Required:

- (i) **Analyze** why the view that Lean is only about waste management is a myth, and mention the three focus areas of Lean manufacturing.
- (ii) Explain the five elements of 5S.
- (iii) **Align** any four benefits of implementing a Lean 5S programme. 7

3. (a) Aarav Tech Solutions Ltd. manufactures a specialized industrial component. The company's market research department has determined that the selling price per unit (p) is dependent on the quantity sold (x) and is given by the demand function: $p = 1,200 - 2x$ (where $x \geq 0$)

The total cost (C) of producing x components is given by the cost function:
 $C = 3x^2 + 200x + 15,000$

Required:

Analyze the following:

- (i) The optimum number of components the company should produce and sell to maximize its profit.
- (ii) The selling price per component at this optimum output level.
- (iii) The maximum profit the company can achieve. 7
- (b) "Risk management is a more realistic term than safety. It implies that future uncertainty and threats are ever-present, that they must be identified, analyzed, evaluated and controlled or rationally accepted." **In the light of this statement, define risk management and mention the steps to be undertaken by a firm in the process of risk management.** 7

4. (a) Give a detailed note on the importance of the 5-Component Dupont Analysis. 7

(b) Mr. Hajime is considering investing in bonds of two companies Lotus Inc. and Woodex Inc. He has recently received a sum of ₹ 35,50,000 from sale of a market related insurance product which he invested in 10 years back. He is nearing retirement age and desire to undertake minimal risk in his investment. He is also worried about default risk associated with his investment and desire to assess the chance of the company (in which he invests) going bust. For the purpose of the financial assessment, he recalls his childhood friend who is currently into financial consultancy. He requests you to assess the bankruptcy risk associated with the Two Companies, Lotus Inc and Woodex Inc. For the purpose, he provides the financial statements of the two companies which are extracted from the annual reports as are given below:

Relevant particulars from Annual Report of Lotus Inc.

Particulars	Amount
Working Capital	₹10,00,000
Retained Earnings	₹ 5,00,000
Earnings Before Interest and Taxes	₹ 7,50,000
Market Value of Equity	₹ 15,00,000
Sales	₹ 12,00,000
Total Assets	₹ 10,00,000
Total Liabilities	₹ 10,00,000

Relevant particulars from Annual Report of Woodex Inc.

Particulars	Amount
Working Capital	₹ 20,00,000
Retained Earnings	₹ 9,50,000
Earnings Before Interest and Taxes	₹ 7,50,000
Market Value of Equity	₹ 18,00,000
Sales	₹ 15,00,000
Total Assets	₹ 12,00,000
Total Liabilities	₹ 12,00,000

Required:

From the above particulars **calculate** the Altman Z-Score for both Lotus Inc. and Woodex Inc. and **advise** to Mr. Hajime as if you are a consultant. 7

5. (a) Sumangal Developer, a leading promoter and land developer, intends to construct luxury apartments this year or a year hence. The company has already acquired a vacant land in a residential area. Mr. Munna, the technical director, along with Mr. Sonu, the finance director, has worked out the following data to decide on when to construct the apartments:

Current interest rate = 12%

Current value of an apartment = ₹ 20 lakh

Value of an apartment a year from now:

₹ 26 lakh under favorable conditions (probability of being favourable is 70%);

₹ 16 lakh under unfavorable conditions

Construction costs (this year as well as next year):

For an 8-unit building = ₹ 90 lakh:

For a 12-unit building = ₹ 120 lakh.

You are required to estimate the value of land and decide whether Sumangal Developer has to construct in the current year or next year, an 8-unit building or a 12-unit building.

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- (b) Two Companies A Ltd. and B Ltd. paid Dividend of ₹ 3.50 per Share. Both are anticipating that Dividend shall grow @ 8%. The Beta of A Ltd. and B Ltd. are 0.95 and 1.42 respectively. The yield on GOI Bond is 7 % and it is expected that stock Market Index shall Increase at an annual rate of 13%.

You are required to Analyze:

- Intrinsic Value of share of Both Companies
- Why there is a difference in the value of share of the two Companies?
- If the Current Market Price of Share of A Ltd. and B Ltd. are ₹ 74 and ₹ 56 respectively **What course** of action should be followed?

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6. (a) From the following details, **Analyze** the total value of human resources for employee groups – skilled and unskilled as per Lev & Schwartz model

Particulars	Skilled	Unskilled
Annual average earning of an employee till retirement	₹1,00,000	₹60,000
Age of retirement	65 years	62 years
Discount Rate	20%	20%
No. of employees in the group	25	20
Average Age	62 years	60 years

It may be assumed that employees will leave the organisation only on retirement. 7

- (b) The summarized financial extracts and related information of M/s X Ltd. for the years ended 31st March 2025 and 2026 are presented below:

Financial Extracts & Additional Data (₹ in lakh)

Particulars	2025	2026
Profit & Loss Extracts:		
Turnover	1,304	1,520
Pre-tax Profit	268	336
Less: Taxation	(92)	(116)
Profit after Tax (PAT)	176	220
Less: Dividends	(60)	(72)
Retained Earnings	116	148
Balance Sheet Extracts:		
Fixed Assets	480	624
Net Current Assets	520	640
Total Capital Employed	1,000	1,264
<i>Financed by:</i>		
Equity Shareholders' Funds	780	944
Medium & Long-term Debt	220	320
Cost of Capital & Other Data:		
Pre-tax Cost of Debt	9%	10%
Cost of Equity	15%	17%
Interest Expense	16	24

Note: The applicable corporate tax rate for both years is 35%.

Requirements:

- (i) **Compute** the Economic Value Added (EVA) for both years.
- (ii) **Examine** whether the company has created shareholder value despite the increase in turnover and profits, with reasons.

7. (a) Yasmin has been **assigned to evaluate** the acquisition price of HBR Limited. The information about HBR Limited is given below:

Price per share (₹)	11
Shares (₹ Million)	50
Debt (₹ Million)	500
Revenue LTM (₹ Million)	700
EBITDA (₹ Million)	125
EPS (₹)	0.9

Yasmin has assessed some recent comparable transactions.

Acquirer	Target	Equity (₹ Million)	EV (₹ Million)	EV / LTM Sales	EV / LTM EBITDA	Equity / LTMPE
A	P	200	500	1.0	9.0	17.0
B	Q	125	250	1.7	12.0	15.0
C	R	700	100	2.2	14.5	20.0
D	S	1200	1000	0.9	8.5	14.0
E	T	200	400	2.5	11.0	22.0

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- (b) Horizon Enterprises Ltd. is studying the possible acquisition of Vertex Solutions Ltd. by way of a merger. The following data are available in respect of both the companies:

Particulars	Horizon Enterprises Ltd.	Vertex Solutions Ltd.
Earnings after tax (₹)	1,20,00,000	36,00,000
Number of equity shares	15,00,000	3,00,000
Market value per share (₹)	240	180

- (i) If the merger goes through by an exchange of equity and the exchange ratio is based on the current market price, **what is** the new earnings per share (EPS) for Horizon Enterprises Ltd.?

- (ii) The Board of Vertex Solutions Ltd. wants to be absolutely sure that the earnings available to its shareholders will not be diminished by the merger. **What should be the exchange ratio in that case?** 7

8. (a) Mr. Ramesh runs Shamala Appliances, a mid-sized home appliance manufacturing company in Pune. Over the last three financial years, the company has faced growing competition, raw material cost fluctuations, and pressure on margins. Mr. Ramesh is concerned about declining profitability and wants a comprehensive financial performance analysis. 7

Here's Shamala Appliances summary financial data (in ₹ lakhs):

Income Statement Highlights:

particulars	2022	2023	2024
Revenue	12,000	13,500	14,400
COGS	7800	9000	10,200
Operating Expenses	2400	2700	3000
EBIT	1800	1800	1200
Interest	200	250	300

Required:

- (i) **Perform** a year-over-year trend analysis of key financial metrics (Revenue growth, EBIT margin, Net Profit margin, etc.).
- (ii) If Mr. Ramesh is considering investing ₹1500 lakhs in automation to improve margins by 4% from 2025 onward, **assess** the financial viability and strategic justification for the investment (assume a 5-year benefit period and 12% cost of capital). **Ignore depreciation** and taxation. Given PV factor @12% for 5 years is 3.605.
- (b) RIL is considering a merger with SIL. The data below are in the hands of both the Board of Directors. The issue at hand is how many shares of RIL should be exchanged for SIL. Both boards are considering three possibilities: 20,000, 25,000 and 30,000 shares. **You are required to Design** a table demonstrating the potential impact of each scheme

on each set of shareholders and **advise** as to which option would be fair to shareholders of both the companies.

	RIL	SIL	Post-merger RIL
Current Earnings (₹)	2,00,000	1,00,000	3,50,000
Shares Outstanding	50,000	10,000	?
EPS (₹)	4	2	?
Price per share (₹)	40	100	?
P/E Ratio	10	10	10
Value of Firm	20,00,000	10,00,000	35,00,000
Annual growth rate in earnings in foreseeable future	NIL	NIL	NIL

