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.
Wherever required, the Candidate may make suitable assumptions and state them clearly in the answers.
Working notes should form part of the relevant answers.
This paper has been divided into two sections, viz, Section-A and Section-B.

Section–A

Strategic Performance Management

(50 Marks)

Answer Question No. 1 which is compulsory and any two from the rest of this Section.

1. Choose the correct option from amongst the four alternatives given: Provide justification/workings: 2×5=10

(i) Customer Relationship Management is not related to
(A) acquiring the right customer.
(B) instituting the best processes.
(C) inventory management.
(D) motivating employees.

(ii) Benchmarking focusses on
(A) Maximum production
(B) Maximum profit
(C) Both A and B
(D) Best practices

(iii) Unsystematic Risk relates to
(A) Market Risk
(B) Beta
(C) Inherent Risk
(D) Interest Rate Risk

(iv) If productivity growth of an organization is ______ that of its competitors, that firm performs and is considered to be more efficient.
(A) higher than
(B) lower than
(C) stable
(D) fluctuating in both higher and lower sides

(v) Which one out of the following costs is not related to quality management or inspection function?

(A) Prevention Costs

(B) Appraisal Costs

(C) Failure Costs

(D) Cost-Audit Cost

2. (a) Differentiate between performance appraisal and performance management. Explain the different components of performance management. 10

(b) The objectives and measures of Balance Score Card (BSC) are to view organizational performance from four perspectives. Examine this statement with the types of information required for BSC. 10

3. (a) A radio manufacturer produces 'x' sets per week at a total cost of ₹ $x^2 + 78x + 2500$. He is a monopolist and the demand function for his product is $x = (600 - P) / 8$, when the price is 'p' per set shows that maximum net revenue is obtained when 29 sets are produced per week, what is the monopoly price? 10

(b) Balance Sheet (extract) of Q Ltd. as on 31 March 2023:

Liabilities	₹ in Crores	Assets	₹ in Crores
Equity Shares	20.80	Fixed Assets	105.60
Long-term Liabilities	104.00	Current Assets	57.60
Current Liabilities	78.40	Profit & Loss A/c	40.00
	203.20		**203.20**

Additional Information:

(i) Depreciation is written off ₹ 8 crores.

(ii) Preliminary Expenses are written off ₹1.60 crores.

(iii) Net Loss ₹ 25.60 crores.

Ascertain the stage of sickness. 10

4. (a) (i) The quality manager of ABC Limited has constructed an np-chart and the control limits for the same are 108.629 (LCL) and 165.371 (UCL). If $n = 400$, you are required to determine the corresponding limits on the p-chart. 2

(ii) A firm has a demand function: $p = 16 - 2x^2$ and the total cost function: $C = -(8/3)\, x^3 + 6x^2 + 15$ where p = Price per unit (₹ '000) and x = Quantity demanded/produced (units in thousand). On the basis of the information given, answer the following:

I. Show that the firm is a monopolist firm. 2

II. Determine the quantity which the firm should produce to maximize profit. Also, determine the amount of profit. 6

(b) "Supply Chain Management Program integrates Manufacturing Operations, Purchasing, Transportation and Physical Distribution into a Unified Program." Explain the objectives and various components of Supply Chain Management. 10

Section–B

Business Valuation

(50 Marks)

Answer Question No. 5 which is compulsory and any two from the rest of this Section.

5. Choose the correct option from amongst the four alternatives given, with justification/ workings. 1 mark will be for the correct choice and 1 mark will be for the justification/ workings. 2×5=10

(i) If a company has a Price Earnings Ratio of 40 and a Return on Equity of 20%, then the market to book value ratio is

(A) 8 times

(B) 8%

(C) Can not be calculated from the given information

(D) None of the above

(ii) Acquisition shows that the price paid for an acquired company is almost invariably __________ its book value and the differences are incorporated under conventional accounting practice as goodwill.

(A) higher than

(B) lower than

(C) equal to

(D) None of the above

(iii) Free Cash Flows occurring to a company in the current year is ₹ 150 crores which are expected to grow at a rate of 10.00%. Its Weighted Average Cost of Capital (WACC) is 15.50%. If the total value of the debt is ₹ 600 crores, then the value of its equity will be

(A) ₹ 800 crores
(B) ₹ 1,850 crores
(C) ₹ 2,400 crores
(D) ₹ 2,500 crores

(iv) ABC Ltd. acquired 100% shares of XYZ for ₹ 2,500 (crores). As on the date of acquisition, the net assets of ABC Ltd. is ________.

(₹ in crores)

Tangible fixed assets	900
Brand (valued by management)	220
Net current assets	580

The goodwill on acquisition under cases–ignoring brand value and considering brand value are–(please note in the pair below, first is ignoring brand value and second, considering brand value)

(A) ₹ 1,020 and ₹ 800
(B) ₹ 800 and ₹ 1,020
(C) ₹ 1,380 and ₹ 1,160
(D) None of the above

(v) If the divestiture value is greater than the present value of the expected cash flows, the value of the divesting firm will

(A) increase on the divestiture.
(B) decrease on the divestiture.
(C) remains same on the divestiture.
(D) None of the above

6. (a) A firm prepares accounts on 31 March each year. The following information was collected from its books:

Stock on 1st April 2022	₹ 58,500
Purchases made during the year	₹ 1,25,000
Sales made during the year	
(Cash ₹ 1,45,000 + Credit ₹ 1,00,000)	₹ 2,45,000
Return by customers	₹ 45,000
Return by the firm	₹ 5,000
Wages paid	₹ 46,000

The average percentage of gross profit from sales is 25%. You are required to value the stock(inventory) on 31 March, 2023 by considering following information:

(i) Stock in the beginning was calculated at 10% less than cost.

(ii) Purchases include purchase of plant of ₹ 10,000

(iii) Plant was installed in the current year and firm's own worker had spent time amount to ₹ 1,000 which was included in wages. 10

(b) Sandip Corporation is considering for going public but is unsure of a fair offering price for the company. Before hiring an investment banker to assist in making the public offering, managers at Sandip have decided to make their own estimate of the firm's common stock value. The firm's CFO has gathered data for performing the valuation using the free cash flow valuation model. The firm's weighted average cost of capital is 12 per cent, and it has ₹ 14,00,000 of debt at market value and ₹ 5,00,000 of preferred stock at its assumed market value. The estimated free cash flows over the next five years, 2019 through 2023, are given below. Beyond 2023 to infinity, the firm expects its free cash flow to grow by 4 per cent annually.

Year	Free Cash Flow
2019	₹ 2,50,000
2020	₹ 2,90,000
2021	₹ 3,20,000
2022	₹ 3,60,000
2023	₹ 4,00,000

(i) Estimate the value of Sandip Corporation's entire company by using the free cash flow approach.

(ii) Using (i) above, along with the data provided above, to find Sandip Corporation's equity share value.

(iii) If the firm plans to issue 2,00,000 shares of equity, what is its estimated value per share? 10

7. (a) The following are the Balance Sheets of Mamta Ltd. and Samta Ltd. as on 31st Match 2023:

Particulars	Mamta Ltd.	Samta Ltd.
Equity and Liabilities:		
Shareholder's Funds	₹ 10,00,000.00	₹ 6,00,000.00
Share Capital (Rs.100 per share)		
Reserve & Surplus		
Statement of Profit & Loss	₹ 20,000.00	0.00
Reserve Fund	₹ 3,40,000.00	0.00
Non-Current Liabilities		
6% Debentures (of ₹10 each)	₹ 2,00,000.00	0.00
Dividend Equalization Fund	₹ 40,000.00	0.00
Employee Provident Fund	₹ 30,000.00	0.00
Current Liabilities		
Trade Payables	₹ 1,00,000.00	₹ 80,000.00
Total	**₹ 17,30,000.00**	**₹ 6,80,000.00**
Assets:		
Non-Current Assets		
Land & Building	₹ 3,00,000.00	0.00
Plant	₹ 11,00,000.00	₹ 5,00,000.00
Current Assets		
Inventories	₹ 1,60,000.00	₹ 80,000.00
Trade Receivables	₹ 1,40,000.00	₹ 90,000.00
Cash and Cash Equivalent	₹ 30,000.00	₹ 10,000.00
Total	**₹ 17,30,000.00**	**₹ 6,80,000.00**

The two companies agree to amalgamate and form a new company called Ekta Ltd. which takes all the assets and liabilities of both the companies. The authorized capital of Ekta Ltd. is ₹ 100 lakh consisting of 10,00,000 equity shares of ₹ 10 each. The assets of Mamta Ltd. are taken over at a reduced valuation of 10% except for Land & Buildings which are acceptable at book value. Both companies are to receive 5% of the net valuation of their respective business as goodwill. The entire purchase price is to be paid by Ekta Ltd. in fully paid shares. In return to Debentures of Mamta Ltd. debentures of same amount and denomination are to be issued by Ekta Ltd. You are required to calculate the purchase consideration. 10

(b) Deepika Ltd. is a highly successful company and wishes to expand by acquiring other firms. Its expected high growth in earnings and dividends is reflected in its price-earning (P/E) ratio of 17. The Board of Directors of Deepika Ltd. has been advised that if it were to take over a firm with a lower P/E ratio than its own, using a share-for-share exchange, it could increase its reported earnings per share. Alia Ltd. has been suggested as a possible target for takeover, which has a P/E ratio of ₹ 10 and 10,00,000 shares in issue with a share price of ₹ 15 each. Deepika Ltd. has 50,00,000 shares in issue with a share price of ₹ 12 each.

Calculate the change in earnings per share of Deepika Ltd., if it acquires Alia Ltd. shares for ₹ 15 per share, assume that the price of Deepika Ltd. shares remains constant. 10

8. (a) Red Label Limited has changed its policy of growth. Now, it is strategically planning to grow inorganically rather than organically. Due to this change in its strategy, it is planning to acquire Green Label Limited and merged it with itself. The following financial information has been extracted from the respective Annual Reports of 2023 of these companies:

Particulars	**Red Label Limited**	**Green Label Limited**
Sales	₹ 1,274.82	₹ 491.69
Less: Operating Expenses	₹ 804.99	₹ 278.48
Operating Profit	**₹ 469.83**	**₹ 213.21**
Less: Interest	₹ 60.11	₹ 79.28
Profit Before Tax	**₹ 409.72**	**₹ 133.93**
Less: Tax @	₹ 122.92	₹ 40.18
Profit After Tax	**₹ 286.80**	**₹ 93.75**
Assets		
Non-Current Assets	₹ 9,262.40	₹ 4,894.65
Current Assets	₹ 6,258.61	₹ 2,828.98
Total Assets	**₹ 15,521.01**	**₹ 7,723.63**
Equity and Liabilities		
Equity Capital (Face Value–₹ 10 per share)	₹ 600.00	₹ 250.00
Other Equities	₹ 5,499.56	₹ 2,582.82
Total Equity	**₹ 6,099.56**	**₹ 2,832.82**
Non-Current Liabilities	₹ 7,311.83	₹ 3,941.76
Current Liabilities	₹ 2,109.62	₹ 949.05
Total Equity and Liabilities	**₹ 15,521.01**	**₹ 7,723.63**
Ratios:		
Net Profit Margin Ratio	22.50%	19.07%
Return on Equity	4.70%	3.31%
Price/Earnings Ratio	25.105	21.333

(i) What is the market price of each company's share before merger?

(ii) Assuming that the management of Red Label Limited (RLL) estimates that the shareholders of Green Label Limited (GLL) will accept an offer of one share of RLL for four shares of GLL. If there are no synergic effects, what will be the market price of RLL's share post-merger? Assume that after merger, the Price/ Earnings Ratio will be 25.

(iii) Will the shareholders of RLL be better or worse off than they were before the merger?

(iv) Due to synergic effects, the management of RLL estimates that the earnings will increase by 20%. In such a case, what will be the new post-merger EPS and price per share? Will the shareholders of RLL be better off or worse off than before the merger? Assume that after merger with synergy gains, the Price/ Earnings Ratio will be 27.55. 12

(b) A company has declared a dividend of ₹ 4 per share for the recently ended financial year. It is estimated that its cost of equity is 14.75%. It has a dividend payout ratio of 40% and book value per share is ₹ 80. You are required to determine its Price/Earnings Ratio. 8

SUGGESTED ANSWERS TO QUESTIONS
SECTION – A

1.

(i)	(C)
(ii)	(D)
(iii)	(C)
(iv)	(A)
(v)	(D)

2. (a)

The terms ‘performance management’ and ‘performance appraisal’ are sometimes used synonymously, but they are different. Performance management is a comprehensive, continuous, and flexible approach to the management of organizations, teams and individuals which involves the maximum amount of dialogue between those concerned. Performance appraisal is a more limited approach which involves managers making top-down assessments and rating the performance of their subordinates at an annual performance appraisal meeting.

Performance appraisal	**Performance management**
Top-down assessment	Joint process through dialogue
Annual appraisal meeting	Continuous review with one or more formal reviews.
Use of ratings	Ratings less common
Monolithic system	Flexible process
Focus on quantified objectives	Focus on values and behaviors as well as objectives.
Often linked to pay	Less likely to be directly linked to pay
Bureaucratic - complex paperwork	Documentation kept to a minimum.
Owned by the HR department	Owned by line managers.

Components of Performance Management:

- **Performance Planning**:
  Performance planning is the first crucial component of any performance management process which forms the basis of performance appraisals. Performance planning is jointly done by the appraiser and the reviewer at the beginning of a performance session. During this period, the employees decide upon the targets and the key performance areas which can be performed over a year within the performance budget, which is finalized after a mutual agreement between the reporting officer and the employee. Organizations using Balance Score Card (BSC), drill Key Performance Indicators (KPIs) down the hierarchy so that each employee is responsible for definite results (called Key Result Areas or KRAs).
- **Performance Appraisal and Reviewing**:
  The appraisals are normally performed twice a year in an organization in the form of mid reviews and annual reviews which are held at the end of the financial year. In this process, the appraisal first offers the self-filled up ratings in the self-appraisal form and describes his/her achievements over a period in quantifiable terms. After the self-appraisal, the final ratings are provided by the appraiser for the quantifiable and measurable achievements of the employee being appraised. The entire process of review seeks an active participation of both the employee and the appraiser for analyzing the causes of loopholes in the performance and how it can be overcome.
- **Feedback on the Performance followed by personal counseling and performance facilitation**:
  Feedback and counseling is given a lot of importance in the performance management process. This is the stage in which the employee acquires awareness from the appraiser about the areas of improvements and information on whether the employee is contributing to the expected levels of

performance or not. The employee receives open and very transparent feedback and along with this the training and development needs of the employee are also identified. The appraiser adopts all the possible steps to ensure that the employee meets the expected outcomes for an organization through effective personal counseling and guidance, mentoring and representing the employee in training programs which develop the competencies and improve the overall productivity.

- **Rewarding good performance**:
  This is a very vital component as it will determine the work motivation of an employee. During this stage, an employee is publicly recognized for good performance and is rewarded. This stage is very sensitive for an employee as this may have a direct influence on self-esteem and achievement orientation. Any contributions duly recognized by an organization help an employee in coping with the failures successfully and satisfies the need for affection.
- **Performance Improvement Plans**:
  In this stage, fresh set of goals are established for an employee and new deadline is provided for accomplishing those objectives. The employee is clearly communicated about the areas in which the employee is expected to improve, and a stipulated deadline is also assigned within which the employee must show this improvement. This plan is jointly developed by the appraiser and is mutually approved.
- **Potential Appraisal: Potential appraisal forms a basis for both lateral and vertical movement of employees**:
  By implementing competency mapping and various assessment techniques, potential appraisal is performed. Potential appraisal provides crucial inputs for succession planning and job rotation.

2. (b)

Four Perspectives of BSC

The objectives and measures view organizational performance from four perspectives - (a) Financial, (b) Customers, (c) Internal Business Process, and (d) Learning and Growth.

- **Financial**:
  The financial perspective serves as the focus for the objectives and measures in the other scorecard perspectives. This perspective is concerned for profit of the enterprises. Under this perspective the focus will be on financial measures like operating profit, ROI, residual income, economic value-added concept, revenue growth, cost reduction, asset utilization etc. These financial measures will provide feedback on whether improved operational performance is being translated into improved financial performance.
- **Customer**:
  This perspective captures the ability of the organization to provide quality goods and services, the effectiveness of their delivery, and overall customer service and satisfaction. The needs and desires of customers have to be attended properly because customers pay for the organization’s costs and provide for its profits. This perspective typically includes several core or generic measures that relate to customer loyalty and the result of the strategy in the targeted segment. They include market share, customer retention, new customer acquisition, customer satisfaction and customer profitability.
- **Internal Business Processes**:
  This perspective focuses on the internal business results that lead to financial success and satisfied customers. To meet organizational objectives and customers’ expectations, organizations must identify the key business processes at which they must excel. Key processes are monitored to ensure that outcomes will be satisfactory. The principal internal business processes include the following: (a) Innovation processes for exploring the needs of the customers. (b) Operation processes with a view to providing efficient, consistent, and timely delivery of product/ service. (c) Post service sales processes.

- **Learning and Growth**:
  This perspective looks at the ability of employees, the quality of information systems, and the effects of organizational alignment in supporting accomplishment of organizational goals. Processes will only succeed if adequately skilled and motivated employees, supplied with accurate and timely information, are driving them. To meet changing requirements and customer expectations, employees may be asked to take on dramatically new responsibilities, and may require skills, capabilities, technologies, and organizational designs that were not available before. The learning and growth perspective identifies the infrastructure that the business must build to create long-term growth and improvement. There will be a focus on factors like employee capability, employee productivity, employee satisfaction, employee retention.

Types of Information Required for BSC

BSC emphasizes that financial and non-financial measures must be part of the information system for employees at all levels of the organization. BSC can be used to improve strategic performance in several ways:

- The process of developing activity measures will make individuals and divisions more aware of how their work fits in with the strategy of the business.
- Individuals and divisions should receive regular reports of their performance against BSC measures relevant to their area of work. This will help them moderate their own performance.
- Senior management should receive regular information on the organization’s overall accomplishments against BSC measures to ensure that strategy is being followed
- Outside stakeholders may also have access to BSC measures help them form a fuller impression of the organization’s value

The main types of information required by the managers to implement the balanced scorecard approach to performance measurement are: Customer Perspective - How do customers see us? - Price, quality, delivery, customer support etc. Internal Perspective- Where we must excel at? - Efficiency of manufacturing process, sales penetration, new production introduction, skilled manpower etc. Learning and Growth Perspective - Can we continue to improve and create value? - Technology leadership, cost leadership, market leadership, research and development, cost reduction, etc. Financial Perspective - How do we look at the shareholders? - Sales, cost of sales, return on capital employed, profitability, prosperity etc.

3. (a)

Monopoly price = Rs. 368

3. (b)

The NCAER Study on Corporate Distress Prediction prescribed the following three parameters for predicting the stage of Corporate Sickness:

(i) Cash profit position (a profitability measure).
(ii) Net working capital position (a liquidity measure).
(iii) Net worth position (a solvency measure).

In the given case, we need to judge the above-mentioned parameters to ascertain the stage of the sickness of the company.

(i) Cash profit = Rs. (16 crores).
(ii) Net Working Capital = Rs. (20.80 crores).
(iii) Net Worth = Rs. (19.20 crores).

Given that all three parameters are negative the firm is fully sick.

4. (a)

(i) Given the information about np-Chart, we can derive p-Chart by dividing limits of np-Chart by n. Therefore, LCL and UCL of p-Chart are as follows:

LCL = 0.272
UCL = 0.413

(ii)

I. The demand function of the firm is $p = 16 - 2x^2$ and its slope is $-4x$. It means that the firm has a negatively slope demand curve which is that of a monopolist firm.

II. Profit will be maximum when quantity produced is 2.
Total loss will be Rs. 1.67 Thousand.

4. (b)

Supply Chain Management encompasses the planning and management of all activities involved in sourcing, procurement, conversion and logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third party service providers, and customers. In essence, Supply chain Management integrates supply and demand management within and across companies.

Objective of Supply Chain Management:

(i) Supply chain Management takes into consideration every facility that has an impact on cost and plays a role in making the product conform to customer requirements: from supplier and manufacturing facilities through warehouses and distribution centers to retailers and stores.

(ii) The supply chain management is to be efficient and cost-effective across the entire system; total system wide costs from transportation and distribution to inventories of raw materials, work-in-process and finished goods are to be minimized.

(iii) Finally, supply chain management revolves around efficient integration of suppliers, manufacturers, warehouses and stores; it encompasses the firm's activities at many levels, from the strategic level through the tactical to the operational level.

Component of Supply Chain Management:

The five basic components of Supply Chain Management are:

1. **Plan**: This is the strategic portion of SCM. You need a strategy for managing all the resources that go toward the meeting customer demand for your product and services.
2. **Source**: Choose the suppliers that will deliver the goods and services you need to create your product. Develop a set of pricing, delivery and payment processes with suppliers and create metrics for monitoring and improving the relationships.
3. **Make**: This is the manufacturing step. Schedule the activities necessary for production, testing, packaging and preparation for delivery.
4. **Deliver**: This is the part that many insiders refer to as logistics. Coordinate the receipt of orders from customers, develop a network of warehouses, pick carriers to get products to customers and set up an invoicing system to receive payments.
5. **Return**: The problem part of the supply chain. Create a network for receiving defective and excess products back from customers and supporting customers who have problems with delivered products.

SECTION – B

5.

(i) (A)
(ii) (A)
(iii) (C)
(iv) (A)
(v) (A)

6. (a)

Value of Inventory ₹ 70,000

6. (b)

(i) The total value of the firm = Rs. 4088457

(ii) The equity value is Rs. 21,88,457

(iii) The price per share would be Rs. 10.94.

7. (a)

Purchase consideration:-

Mamta Ltd. = ₹ 13,23,000

Samta Ltd. = ₹ 6,30,000

7. (b)

Increase in earnings per share = Rs. 0.0988.

8. (a)

(i)

Particulars	Red Label Limited	Green Label Limited
Market Price of Shares (Before Merger)	Rs. 120.00	Rs. 80.00

(ii)

The market price per share of RLL post-merger Rs. 143.50

(iii)

Since the market price of RLL share after merger has gone up to Rs. 143.50 from Rs.120, the shareholders of RLL will be better off.

(iv)

With synergy gains, PAT of RLL post-merger will increase by 20%	Rs. 456.66
EPS	Rs. 6.89
Given Price/Earnings Ratio-Post merger	Rs. 27.55
The market price per share of RLL post-merger (with synergy gains)	Rs. 189.82

8. (b)

Price/Earnings Ratio ₹ 5.93