PAPER – 20A : STRATEGIC PERFORMANCE MANAGEMENT AND BUSINESS VALUATION
SUGGESTED ANSWERS
SECTION – A

1. (a)

(i) (B)
(ii) (A)
(iii) (B)
(iv) (C)
(v) (B)
(vi) (A)
(vii) (C)
(viii) (C)
(ix) (C)
(x) (B)

1. (b)

(xi) (A)
(xii) (B)
(xiii) (C)
(xiv) (B)
(xv) (A)

SECTION – B

2. (a)

The objectives and measures view organizational performance from four perspectives - **(1) Financial, (2) Customers, (3) Internal Business Process and, (4) Learning and Growth.**

(1) Financial : The financial perspective serves as the focus for the objectives and measures 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.

(2) 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 must be attended to properly because customers pay for the organization's costs and provide for its profits. This perspective typically includes several core or genetic 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.

(3) 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.

(4) 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.

Limitations:

BSC is subject to the following limitations –

(i) There is no clear relation between BSC and shareholder value.
(ii) It does not lead to a single aggregate summary of control.
(iii) The measures may give conflicting signals and confuse management.
(iv) It involves substantial shifts in corporate culture.

2. (b)

Both Six Sigma and TQM are quality management tools which have been put to effective use by companies. Although the methodologies and procedures used in the two appear quite similar, there are certain differences between the two which are enumerated in the next few lines;

(i) Six-Sigma is a relatively newer concept than TQM – while TQM refers to continuous effort by employees to ensure high quality products Six Sigma incorporates many small changesin the systems to ensure effective results and better customer satisfaction. As such TQM evolved, through contributions of various quality gurus post 1950, as a philosophy of quality management. Feigenbaum introduced the concept of "Total Quality Control" (TQC)in his first book "Quality Control Handbook" in 1951. This is considered as the start of the philosophy of TQM. Six Sigma, on the other, incepted in 1981 in Motorola.

(ii) Focus - The focus of TQM is to preserve existing quality standards whereas. Six Sigma focuses on improving quality by minimizing and eventually eliminating defects from the system.

(iii) Implementation – implementation of Six Sigma is much more complicated in comparison to implementation of the TQM process. Deployment of Six Sigma is dependent on certified professionals (referred to as Master Black Belts). Even the employees are certified as "Green Belts" or "Black Belts" depending on their level of proficiency. TQM, on the other hand, is a philosophy which can be referred to a part time activity which does not requireany special training.

(iv) Results - Six-Sigma delivers better and effective results than TQM. Customer feedback makes Six Sigma more accurate and result oriented. There is a growing consensus[24] that six sigma will outperform TQM in future.

3. (a)

For Domestic Market:

Optimum selling price = ₹ 80
Total contribution = ₹ 3,43,000

For Export Market:

Optimum selling price = ₹ 128
Total contribution = ₹ 4,75,000

3. (b)

Value at Risk (VaR) is one of the popular methods of measuring financial risks. There are different types of VaR— long-term VaR, marginal VaR, factor VaR, and shock VaR. VaR is also defined as the threshold value such that the probability of a portfolio making a market to a market loss over a specific time horizon exceeds this value. For example, if a portfolio stock has a one day 3 per cent VaR of ₹10 million, there is 0.03 probability that the portfolio may face a reduction in value by more than ₹10 million over a specific time period. This is on assuming that normal market operations and there is no trading. A loss which exceeds VaR threshold is known as 'VaR break'. VaR has applications in financial risk management, risk measurement, controland reporting. It can also be used in calculating regulatory capital.

Advantages :

VaR has the advantage of a structured methodology for critically analysing a risk that is available as part of management function. Daily publication of a number on time and with particular statistical data enables an organization to maintain a high objective standard. However, robust backup systems and assumptions regarding default need to be established. A quotation runs thus, _risk taking institution that does not compute VaR might escape disasterbut an institution that cannot compute VaR will not' according to Aaaron Brown.

Another advantage of VaR is that it differentiates risks into two regimes, that is, normal days and extreme occurrences. Inside the VaR limit, application of the conventional statistical methods is reliable. Out VaR limit risk should be analysed with stress testing on the basis of data available on the long-term and in the broad market. Distribution losses beyond VaR point are both impossible and useless. As such the finance manager should concentrate on developing plans to limit the loss if possible or to survive the loss.

Limitations :

There has been criticism against VaR. It is said that this concept has led to excessive risk taking and leveraging by financial institutions. Again, VaR is not sub-additive which means that VaR ofa combined portfolio can be larger than the sum of the VaRs of its components.

Alternative Solution :

Value at Risk (VaR) is one of the popular methods of measuring financial risks. There are different types of VaR — long-term VaR, marginal VaR, factor VaR, and shock VaR. VaR is also defined as the threshold value such that the probability of a portfolio making a market to a market loss over a specific time horizon exceeds this value. For example, if a portfolio stock has a one day 3 per cent VaR of ₹10 million, there is 0.03 probability that the portfolio may face a reduction in value by more than ₹10 million over a specific time period. This is on assuming that normal market operations and there is no trading. A loss which exceeds VaR threshold is known as 'VaR break'. VaR has applications in financial risk management, risk measurement, controland reporting. It can also be used in calculating regulatory capital.

Advantages :

(i) **Easy to understand :** VaR is a Single number that approximates the amount of Risk in a portfolio. VaR is presented either as a percentage of the value of a portfolio or simply in price units such as dollars. This makes it easy to understand and interpret.

(ii) **Applicability :** VaR can be used to measure and make a comparison of risks across asset classes and portfolios. This equips the risk manager with relevant information on possible risks.

(iii) **Acceptability :** The VaR figure is a widely accepted standard in the buying or selling of assets. Besides, it is acceptable to banking regulators. VaR has the same interpretation irrespective of the assets you are considering. Further, VaR is regularly seen in annual reports of financial companies.

(iv) Used for performance evaluation: Instead of evaluating a firm's performance purely based on returns, a risk-adjusted return can be calculated by considering the level of risk taken. In this case. VaR can serve as an adjustment basis.

Reliability: VaR, as a measure of risk, can be verified by back testing.

Limitations :

(i) Depends on inputs and Assumptions:

(ii) Inconsistent Results: Different approaches to calculating VaR use varying assumptions and, as a result, end up getting different value of VaR of the same portfolio.

(iii) Misleading and a false sense of Security : When VaR is calculated at a confidence interval of 99%, then its interpretation is that there is a 99% probability that one will lose no more than the VaR value obtained. This may give and investor a false sense of Security.

(iv) Difficult to Calculate

4. (a)

Return on Equity as per Dupont analysis -

Net profit margin* Asset turnover *(1 + Debt / Equity)Or

Operating margin * Operating efficiency * Financial leverage

= 5.95 % x 4.40 x (1 + 0.38) = 36.13%

Compare the ROE with industry average or investor expectations – (i) if it is 25% that existing return i.e., 36.13 % is good and (ii) if it is 40% then many options are available to improve upon the ROE (36.13 %). Operating margin, operating efficiency and financial leverage are subjects corresponding to marketing, production, and finance function respectively. Depending upon the feasibility and scope available, the management may adopt a suitable strategy to reward the shareholders.

4. (b)

NCAER Model for Corporate Distress Prediction:

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 positions (a solvency measure)

If anyone of the above-mentioned parameters becomes negative in case of a firm, it can be predicted that the firm is likely to move towards sickness. If all the three parameters are negative then it shows that the company is fully under corporate distress. In order to decide the stage of sickness in the given case, we have to calculate all the three above mentioned parameters.

- Cash profit position : It means that we have to calculate cash from operating activities. In the given case, Cash from Operating Activities = Net Profit + Depreciation Written Off + Preliminary Expenses Written Off = ₹ (19.10) crores which is negative.
- **Net Working Capital :** Net Working Capital = Current Assets – Current Liabilities = ₹ (1,261.41) crores which is also negative.
- **Net Worth:** Net Worth = Equity Share Capital + Other Equity = ₹ (206.19) crores which is also negative.

Thus, we find that in this case, all the three parameters are negative and hence, we can conclude that the company is a sick company and its stage of sickness is 'fully sick'. Therefore, immediate necessary drastic revival measures are essentially required for the survival of the company.

5. (a)

Enterprise value (EV) = ₹ 18,10,000

Book value is not considered for computing enterprise value.
Profit before depreciation or after depreciation has no meaning in computing enterprisevalue.
Fixed and current assets are not part of enterprise value.
Only market values are considered in enterprise value.

5. (b)

(i) Value of Business = ₹ 700 Lakh

(ii) Market price of share = ₹ 47

6. (a)

Age Group	**Value of employees (₹)**
30 – 39 (Assuming all employees are just 30 years old)	32,47,600
40 - 49 (Assuming all employees are just 40 years old)	36,42,500
50-59 (Assuming all employees are just 50 years old)	30,72,500

6. (b)

Value of the Company under EVA approach = ₹ 170.86 crore.

7. (a)

(i) Capital structure of merged firm — (In Rupees)

Equity capital	25,00,000
Retained Earnings	50,00,000
14% Preference shares	5,00,000
13% Debts	50,00,000
	1,30,00,000

Debt / total capital = 38.46%

(ii) Yes, the financial risk has declined due to the lower debt ratio of the merged firm. Thesame was 50% in a pre-merger situation.

(iii) Additional Debts = ₹ 30,00,000

7. (b)

Expected Deal price = ₹ 300

8. (a)

1. (i) Three critical success factors of Fitness solution are :

- ❖ Developing and maintaining a high level of customer satisfaction
- ❖ Offering facilities that are not much below that offered by the competitors
- ❖ Keeping a tight cap on costs as there is considerable competitive pressure in thisindustry and entry barriers are not high.

(ii) Following is a possible Balanced Scorecard of the company

Financial Perspective	Operating expenses relative to budget Cash flow Total daily operating revenue
Customer Perspective	Turnover rate among members Customer satisfaction rate
Internal Business Perspective	Number of employee complaints Number of equipment not available on average day due to maintenance
Innovation & Learning	Number of new equipment put into service Number of staff participating in training programme

8. (b)

EPS when exchange ratio is in proportion to relative EPS of two companies:

EPS after merger = ₹ 4

EPS when share exchange ratio is 0.5:1:

EPS after merger = ₹ 4.125

Impact of merger on EPS for shareholders of Company X and Company Y

a. Merger took place on relative EPS of two companies; therefore, both companies maintain their EPS and no impact on EPS of shareholders of both companies.

b. Impact on Shareholders of Company X.

	(₹)
Increase in EPS	0.125

Impact on shareholders of Company Y

	(₹)
Decrease in EPS	0.1875