**PAPER – 20 : STRATEGIC PERFORMANCE MANAGEMENT AND BUSINESS VALUATION**

**SUGGESTED ANSWERS**

**SECTION – A**

**1.**

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

**2. (a)**

**Analytical CRM**

The purpose of analytical CRM is customer data analysis, its evaluation, modeling, and prediction of customer behaviour. In real life situation the analytical CRM can for example gather all the data about customers inquiring about a specific product by using data mining (tool for data gathering), what services they purchased right away and what services they purchased eventually. It can find patterns in their behaviour and propose next steps during up-selling or cross-selling. It can evaluate the efficiency of a marketing campaign, propose prices, or even develop and propose new products. This way analytical CRM serves as some sort of help during decision making, e.g. manuals for employees working in services concerned with how to react to certain customers' behaviour.

**Operative CRM**

Mainly supports the actual contact with customers conducted by front office workers and general automation of business processes including sales of products, services, and marketing. All communication with the customer is tracked and stored in the database and if necessary, it is effectively provided to users (workers). The advantage of this approach being the possibility to communicate with various employees using various channels but creating the feeling that the customer is being taken care of by just one person. It can also minimize the time that the worker must spend typing the information and administrating (the data is shared). This allows the company to increase the efficiency of their employees' work and they are then able to serve more customers.

**The basic advantages of CRM are as follows:**

- satisfied customer does not consider leaving
- product development can be defined according to current customer needs
- a rapid increase in quality of products and services
- the ability to sell more products
- optimization of communication costs
- proper selection of marketing tools (communication)
- trouble-free run of business processes
- greater number of individual contacts with customers
- more time for customer
- differentiation from competition
- real time access to information
- fast and reliable predictions
- communication between marketing, sales, and services
- increase in effectiveness of teamwork
- increase in staff motivation

Advantages and benefits are almost endless. Unfortunately, some negatives exist. One of them is the fact that proper implementation and running of CRM is very difficult (technology, people – employees, initial money investment etc.), another one is the safety of information that companies keep about their customers, sharing information with third party and its overall protection. The entire operating principle of CRM (gathering information, recording calls, analyzing all clients' activities etc.) is invasion of privacy of customers. For effective relationship management it is necessary for a company to not only hold onto their perspective but also try to understand why it is beneficial for a customer to establish a long-term relation. The customer always cares primarily about satisfaction of his needs. If a company wants to establish mutual long-term relationship it must offer him something extra, some "reward" that will give him the desired value. The success rate of a company being able to satisfy this desired value represents the quality of CRM.

**2. (b)**

**Factors contributing to the risks of uncertainty in Supply Chain Management:**

**(i) Matching Supply and Demand:**

It is a major challenge. Mismatch of supply and demand may be due to many reasons viz. raw material shortages, shortage of spares, larger than anticipated inventories, and productivity inefficiencies. Obviously, this difficulty stems from the fact those months before demand is realized; manufacturers have to commit themselves to specific production levels. These advance commitments imply huge financial and supply risks.

**(ii) Inventory and back – Order levels fluctuate considerably across the supply chain:**

Even when customer demand for specific products does not vary greatly. To illustrate this issue, consider the above figure, which suggests that in typical supply chain, distributors orders to the factory fluctuate far more than the underlying retailer demand.

**(iii) Forecasting does not solve the problem:**

It is impossible to predict the precise demand for a specific item, even with the most advanced forecasting technique.

**(iv) Demand is not the only source of uncertainty:**

Delivery leads times, manufacturing yields, transportation times, and component availability also can have significant chain impact.

**(v) Recent trends have a role to play:**

Lean manufacturing, outsourcing and off shoring that focus on cost reduction increases risk significantly.

**3. (a)**

Maximum profit is at = 50 units

Price = ₹ 2280

**3. (b)**

Z-score = 4.88

As the calculated value of Z-score is much higher than 2.99, it can be strongly predicted that the company is a non-bankrupt company (i.e., non-failed company).

**4. (a)**

Financial performance analysis can be classified into different categories based on the material used and modes of Operandi as under:

**A.** Material used: Based on the material used financial performance can be analyzed in the following two ways:

1. **External analysis**: This analysis is undertaken by the outsiders of the business namely investors, credit agencies, government agencies, and other creditors who have no access to the internal records of the company. They mainly use published financial statements for the analysis and as it serves limited purposes.
2. **Internal analysis**: This analysis is undertaken by the persons namely executives and employees of the organization or by the officers appointed by the government or court who have access to the books of account and other information related to the business.

**B.** Modus operandi: Based on modus operandi financial performance can be analyzed in the following two ways:

1. **Horizontal Analysis**: In this type of analysis financial statements for several years are reviewed and analyzed. The current year's figures are compared with the standard or base year and changes are shown usually in the form of percentages. This analysis helps the management to have an insight into levels and areas of strength and weaknesses. This analysis is also called Dynamic Analysis as it is based on data from various years.
2. **Vertical Analysis**: In this type of Analysis study is made of the quantitative relationship of the various items of financial statements on a particular date. This analysis is useful in comparing the performance of several companies in the same group, divisions, or departments in the same company. This analysis is not much help in the proper analysis of a firm's financial position because it depends on the data for one period. This analysis is also called Static Analysis as it is based on data from one date or for one accounting period.

**4. (b)**

**Taxonomy of OLAP System:**

OLAP systems have been traditionally categorized using the following taxonomy.

**Multidimensional OLAP (MOLAP)**

MOLAP is a "multi-dimensional online analytical processing".MOLAP stores this data in an optimized multi-dimensional array storage, rather than in a relational database. Therefore, it requires the pre-computation and storage of information in the cube - the operation known as processing. MOLAP tools generally utilize a pre- calculated data set referred to as a data cube. The data cube contains all the possible answers to a given range of questions. MOLAP tools have a very fast response time and the ability to quickly write back data into the data set.

**Relational OLAP (ROLAP)**

ROLAP works directly with relational databases. The base data and the dimension tables are stored as relational tables and new tables are created to hold the aggregated information. Depends on a specialized schema design. This methodology relies on manipulating the data stored in the relational database to give the appearance of traditional OLAP's slicing and dicing functionality. In essence, each action of slicing and dicing is equivalent to adding a "WHERE" clause in the SQL statement. ROLAP tools do not use pre-calculated data cubes but instead pose the query to the standard relational database and its tables in order to

bring back the data required to answer the question. ROLAP tools feature the ability to ask any question because the methodology does not limit to the contents of a cube. ROLAP also has the ability to drill down to the lowest level of detail in the database.

**Hybrid OLAP (HOLAP)**

There is no clear agreement across the industry as to what constitutes "Hybrid OLAP", except that a database will divide data between relational and specialized storage. For example, for some vendors, a HOLAP database will use relational tables to hold the larger quantities of detailed data, and use specialized storage for at least some aspects of the smaller quantities of more-aggregate or less- detailed data. HOLAP addresses the shortcomings of MOLAP and ROLAP by combining the capabilities of both approaches. HOLAP tools can utilize both pre- calculated cubes and relational data sources.

**Comparison of benefits**

Each type has certain benefits, although there is disagreement about the specifics of the benefits between providers.

Some MOLAP implementations are prone to database explosion, a phenomenon causing vast amounts of storage space to be used by MOLAP databases when certain common conditions are met: high number of dimensions, pre-calculated results and sparse multidimensional data. MOLAP generally delivers better performance due to specialized indexing and storage optimizations. MOLAP also needs less storage space compared to ROLAP because the specialized storage typically includes compression techniques.

ROLAP is generally more scalable. However, large volume pre-processing is difficult to implement efficiently so it is frequently skipped. ROLAP query performance can therefore suffer tremendously. Since ROLAP relies more on the database to perform calculations, it has more limitations in the specialized functions it can use.

HOLAP encompasses a range of solutions that attempt to mix the best of ROLAP and MOLAP. It can generally pre-process swiftly, scale well, and offer good function support.

## SECTION – B

**5.**

(i) (D)

(ii) (A)

(iii) (C)

(iv) (A)

(v) (B)

**6. (a)**

Value of Total Investment for Balance Sheet = ₹ 2,213.86

**6. (b)**

Brand value = ₹ 409,71,666

**7. (a)**

(i) Swap ratio based on current market price: 1 Share of Sun Ltd., for 5 Shares of Moon Ltd.

(ii) EPS after the acquisitions = ₹ 15.

**7. (b)**

**Value of Synergy:**

***(₹ in Lakhs)***

| | **Scenario I** | **Scenario II** |
|---|---|---|
| Value of Synergy | 19743 | 71740 |

**8. (a)**

**(i)**

(1) Operating income = ₹ 31,42,857 or ₹ 31,43,000(Rounded off)

(2) EVA= ₹ 9,65,000

**(ii)** Mona Ltd. would be considered as the best investment since the Economic value added of the company is highest at ₹ 2730 and its weighted average cost of capital at 13.52% is the lowest.

**8. (b)**

(i) The relationship between EVA and MVA is more complicated than the one between EVA and firm value. The market value of a firm reflects not only the expected EVA of assets in place but also the expected EVA from future projects. If the actual EVA is smaller than the expected EVA the market value can decrease even though the EVA is higher.

This does not imply that increasing EVA is bad from a corporate finance standpoint. In fact, given a choice between delivering a below-expectation EVA and no EVA at all, the firm should deliver the below-expectation EVA. It does suggest that the correlation between an increasing year-to-year EVA and market value will be weaker for firms with high anticipated growth (and excess returns) than for firms with low or no anticipated growth.

(ii) The total value of the project ₹ 74,44,000 (Total of PV cash flow).

Since the value of Shyam & Company is ₹ 74,44,000 a figure greater than the minimum desired amount of ₹ 50 lakhs to be paid to Shyam & Company, Ram & Company can consider buying Shyam & company.