FINAL EXAMINATION

GROUP IV

(SYLLABUS 2012)

SUGGESTED ANSWERS TO QUESTIONS

DECEMBER 2014

Paper-17: STRATEGIC PERFORMANCE MANAGEMENT

Time Allowed : 3 Hours **Full Marks : 100**

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

This Question paper has been divided into 3 parts viz., Section-A (60 marks), Section-B (20 marks) and Section-C (20 marks).

Please note:

- **From Section-A: Performance Management, you are to answer Question No. 1 which is Compulsory, carrying 20 marks. Further answer any two questions from the rest of the questions in this section, each carrying 20 marks.**
- **From Section-B: IT & Econometric tool in Performance Management, you are to answer any two questions, each carrying 10 marks.**
- **From Section-C: Enterprise Risk Management, you are to answer any two questions, each carrying 10 marks.**

Section-A (60 Marks)
Performance Management

Answer question No. 1, which is compulsory, carrying 20 marks.
Further answer any two questions from the rest of the questions in this section, each carrying 20 marks.

1. **The Moon glow Electronics Company is a rapidly growing manufacturer of sophisticated electronic equipment for industrial applications. Despite the intense competition of the industry, Moon glow has grown to over ₹ 500 crores per year in Sales.**

   Still the Moon glow Financial Management felt that there was a lack of commitment by the line management. There was a typical command and control orientation. The prices of the products were usually above what they had projected by more than 10%. There were distinct deficiencies with the company's current cost management. There was an inadequate concern for the cost management and cost reduction. The Company's growth was sluggish. It was concluded that a significant change in the mind set would have to be made.

   The management further observed that in the company, the cost management during the design stage was not a priority. Rather most attention to cost issues occurred after the products had reached production.

   The Moon glow management had read a lot about the Japanese management practices like TQM, JIT, Cost management etc., and about the Japanese finance and accounting practices. The management concluded that Moon glow Electronics could apply many of the Japanese financial and accounting practices.

   The CEO of the company wrote in the company's annual report that the company's

financial executives will need to institute a Target Costing programme to formalize the company's cost reduction efforts.

You are required to:
(i) Define the term 'Target Costing' and its key principles.
(ii) State the problems that are being faced by the company.
(iii) What remedial steps are to be taken by the company to solve its problems?

5+5+10=20

Answer:

1. (i) Target Costing: is a system under which a company plans in advance for the product price points, Product Costs and margins that it wants to achieve. If it cannot manufacture a product at these planned levels, then it cancels the product entirely. In other words, it is a process of determining the actual cost price of any product or service after considering the desired profit margin behind the same. It helps in completing the product within the set price by changing the process for the same or by making the existing process more efficient. With target costing, a management team has a powerful tool for continually monitoring products from the moment they enter the design phase and onward throughout their product life-cycles. It is considered to be one of the most important tools for achieving consistent profitability.

A Target Cost is the allowable amount of cost that can be incurred on a product and still earn the required profit from that product. It is a market-driven cost that is computed before a product is produced.

The fundamental objective of Target Costing is very straightforward. It is to enable management to manage the business to be profitable in a very competitive market place. In effect, Target Costing is a proactive Cost Planning, Cost Management and Cost Reduction Practice whereby Costs are planned and managed out of a product and business early in the design and development cycle, rather than during the later stages of product development and production.

Target Costing obviously applies to new products. It also applies to Product modifications or succeeding generations of products.

Target Costing is as much a significant approach regarding the relationship of prices and costs, a discipline and an integrated approach to decision-making, as it is the application of a set of techniques and tools. Three externally-oriented analysis-Market Assessment Tools, Industry and Competitive Analysis and Reverse Engineering-provide a firm with a foundation for defining the proposed new product and establishing its Target Price.

<u>Principles in Target Costing</u>:

There are six key principles in Target Costing:

(a) Price-led Costing (i.e., Target Price less Desired Mark-up = Target Costs)
(b) Customer Focus
(c) Focus on design of products and processes
(d) Cross-functional teams
(e) Life-Cycle Cost Reduction and
(f) Value-chain involvement.

(ii) Problems that are faced by Moon glow Electronics:
(a) There is a lack of commitment by the line management of Moon glow Financial

Management. There is a typical command and control orientation style. The prices of the products are usually above what they had been projected.

(b) There were distinct deficiencies with the company's current cost management. There was an inadequate concern for the cost management and cost reduction.

(c) The Company's growth is sluggish.

(d) A significant change in the mind set would have to be made.

(e) The cost management during the design stage is not a priority. Rather most attention to cost issues occurred after the products had reached production.

All the above problems prompt the need for the company for instituting a Target Costing Programme.

(iii) Remedial steps to be undertaken by the company to solve its problems:

- The top management should visit Japan in order to understand the Japanese management, finance and accounting practices better.
- There should be frequent (6 months) budgets with a heavy involvement and commitment by the line management.
- The company should adopt strategic cost management, using Target Costing techniques.
- The management should have a thorough understanding of the deficiencies in the company's existing cost management practices.
- Target Costing should be made a way of life, with initiation of specific steps for introduction of Target costing system.
- There is a need for a more rigorous cost management
- There has to be a significant change in the mind set-whereby cost reduction would become a way of life throughout the company.
- The company should pay more attention to costs during the design stage itself and appropriate training and tools should be provided by the company.
- The company should appropriately plan its prices and system for achieving cost reductions. The company should arrange for periodical cost reviews.
- The company should develop 'team-approach' to new product development.

2. The ripple efforts of the 2012 Global Economic meltdown had begun to hurt, the ₹ 1,268 crore M. K. Paper Limited. Like all other business houses in India, M. K. Paper Ltd. was also finding the going tough. The general trend of soaring prices and contraction in demand had started affecting the sale of M. K. Paper Ltd. products also. Its customers were focusing on correcting their inventory positions (using existing stocks of materials to keep production lines and marketing activities rolling). Consequently, they were not buying much from M. K. Paper Ltd. Even the investors did not like what they saw—M. K. Paper Ltd. stock fell from ₹ 57.20 on 1 January, 2012 to a low of ₹ 14.12 on 12 March, 2013. The company was in the midst of Economic crisis. Mr. Sondhi, the Managing Director of the Company, realized that, some strong measures must be taken to extricate the company from its present crisis. To this end, Mr. Sondhi held several brainstorming sessions with the top management team and finally identified the focus areas:

- **Managing working capital flows, cutting costs and paying attention to employee productivity.**
- **Moving away from the traditional approach one usually follows during the recessionary periods.**

Mr. Sondhi instead of shutting down company's plants and cutting production, decided to continue to operate the Company's two plants at Gujarat and Odissa at 100% capacity. To match sales with production, he planned to reach out to newer customers by widening Company's distribution network. He identified packaging boards to be marketed in rural areas where the meltdown had minimal effect. As the market conditions were still difficult, the company also decided to cut the prices by 2 to 3 per

cent. Along with the price cut, its marketing thrust in rural areas ensured that the sales were not impacted much. Net sales remained flat throughout 2012-13, though the profitability of the Company suffered because of the lower margins it received from its rural thrust. For raising capital, the Company did not approach banks and investors, rather it intensified its efforts to recover its debits from its clients. The efforts resulted in fast recovery of crores of rupees. Disputed debts were also settled expeditiously to raise more cash. To cut costs further, the Company took steps to improve productivity and reduce its wage bill. Inefficient employees were asked to leave. No new appointments were made unless they were critically important. In addition, employees received lower increments for 2012-13; Even Mr. Sondhi did not take any increment.

When the global slowdown sent the international prices of the pulp, the main raw material for the Paper industry, crashing from ₹36,960 per tonne in April, 2012 to ₹18,240 per tonne in September, 2012 the company bought enough pulp to last for about 9 months as against its policy of buying, in the normal course, pulp for about 2-3 months. According to Mr. Sondhi, this decision also resulted in a huge saving. Mr. Sondhi and his senior management team also re-evaluated the organizational structure to improve efficiency in the organization. When all the above strategic decisions had been successfully implemented, Mr. Sondhi knew that the worst for the company was over. This was also reflected in gradual increase in the quarterly profits of the company, Mr. Sondhi however sounded very modest about his stewardship of the Company while appreciating his senior management team for the great job done to ride out the slowdown.

Answer the following questions: 4x5=20

- **(a) Where did the recession hit M. K. Paper Ltd.?**
- **(b) Explain with reasoning the corporate strategy the Company had adopted for its survival.**
- **(c) What functional strategies were undertaken by the Company to overcome its crisis?**
- **(d) State the basic responsibilities of a strategic leader in a business house. Explain whether or not Mr. Sondhi provided strategic leadership to the Company.**
- **(e) What lessons are learnt from the experience of M. K. Paper Ltd. to ride out the economic meltdown?**

Answer:

2. (a) The economic recession of 2012 hit M. K. Paper Ltd. primarily in three areas:
   - (i) Contraction in demand for its products due to general trend of soaring prices all over,
   - (ii) Financial crunch and
   - (iii) Fall in its share prices.

   The customers of the company were not buying much and they started focusing on correcting their inventory. This led to decrease in demand and reduction in funds for their working capital needs.

   (b) The company had followed the stability strategy to tide out the economic crisis. It decided to maintain its production at pre-melt down period. It reflected in the decision of the top management to operate its two plants in Gujarat and Odissa at 100% capacity. It also decided to widen its distribution network to counter the challenge of contraction in demand. It identified rural sector to market aggressively its packing boards. The company had rightly decided against divestment or liquidation strategies as it knew that the meltdown was only a passing phase, so the need of the hour was to' stay afloat and then to wait for the appropriate time to plan for expansion, if needed.

(c) The top management team of the company under the leadership of Mr. Sondhi, the Managing Director of the company decided to adopt various functional 'strategies to ride out the slowdown. After several rounds of brainstorming sessions with the top management Mr. Sondhi, identified the focus areas and took initiatives on the following functional strategies:

Production Strategy: In the face of contracting demand, Mr. Sondhi took a bold decision Instead of shutting down plants and cutting production he decided to operate the company's two plants in Gujarat and Odissa at 100% capacity. Moreover, he also took another unusual decision to buy pulp - the main raw material for the paper industry, when its prices crashed substantially, in huge quantity which resulted in a huge saving for the company.

Marketing strategy: To maintain the production and subsequent sales, the company decided to identify new customers and widen its distribution networks to reach out to new customers. The thrust was laid to push the sales of its packaging board's material to consumers in the rural areas where the effects of meltdown were minimum. Prices were reduced by 2-3% to give thrust to sales.

Financial strategy: For managing working capital, the company again took an unusual step of not approaching banks and investors. Instead the company decided a unique strategy to intensify its efforts to collect its debits from the clients. The company succeeded in collecting crores of rupees in a very short period through debt recoveries. It even decided to settle its disputed debts outside the court very expeditiously. This also fetched a good amount of cash to the company.

Human Resources Management Strategy: The Company took steps to improve employees' productivity and reduction in wage bill. The top management also gave to all its employees lower increments. Even Mr. Sondhi did not accept any increment for himself. Non - performing employees were asked to leave the company. New recruitment of employees was stopped unless it was critically important.

Review of Organization Structure: For the successful implementation of company's strategies to ride out the slow down, the organizational structure of the company was reevaluated and reviewed. It was directed towards improving efficiency within the organization.

(d) In the company a strategic leadership was provided by its managing director who discharged his responsibility through the following well thought out strategies -
(i) To manage the employees of all classes for effective and efficient working.
(ii) Sustaining high performance over a time
(iii) Willingness to take candid, bold and, at times, unusual and contrarian decisions
(iv) Taking such decision making responsibilities which cannot be delegated
(v) Effective feedback through face to face communication

When M. K. Paper Ltd. was in the midst of financial crises due to economic meltdown its Managing Director realized that it was the time to bury down the hatchets and prepare for a long haul. Like a truly effective leader, he took some strategic decisions to put company back on its track.

Some of the important decisions were:
- to operate the company's plants in Gujarat and Odissa at their 100% capacity so that production remained at pre-melt down period levels.

- to match sales with production and to overcome the effects of recession on the company's sales it was decided to widen the distribution network to reach out to new customers.
- he also refrained from easy decision to approach banks and investors for funds to manage working capital requirements. Instead, he initiated steps for speedy recovery of debts from its clients including recovery of disputed debts through negotiated settlements. All this resulted in collecting crores of rupees in a short period, he also set an example before employees by refusing to accept any increment in his own salary. Employees also accepted lower increments for 2012-13.
- decision to buy pulp in bulk when its prices crashed so that the stock of pulp lasts for a much longer period resulting in huge savings in costs.

Thus Mr. Sondhi provided an effective strategic leadership by taking some bold strategic decisions which had helped the company to come out of its crisis.

(e) There are lessons to be learnt from any crisis. The lessons learned from the M. K. Papers can be summarized as follows:
Do not Panic,
Consult others,
Go to micro level,
Take bold decisions,
Leaders should set an example.

3. (a) List the steps of Business Process Re-Engineering. **6**
(b) Discuss the benefits of Branding. **6**
(c) XYZ Ltd., provides the following details on its new product:
Years 1 & 2: R&D Costs: ₹ 2,40,000; Design Costs ₹1,60,000
Years 3 to 6: Other functional Costs:

Function	One-time Costs (₹)	Cost per unit (₹)
Production	**1,00,000**	**25**
Marketing	**70,000**	**24**
Distribution	**50,000**	**16**
Customer Service	**80,000**	**30**

The Sale quantities during the Product Life Cycle at various Selling Prices are:

Selling Price per unit (₹)	**400**	**480**	**600**
Sale Quantity in units	**5,000**	**4,000**	**2,500**

Ignoring the time value of money and assuming that R&D costs and design costs represent total costs incurred in 2 years, compute the net incomes generated over the Product Life Cycle at various prices. Which price the company should select? **8**

Answer:

3. (a) Business Process Re-Engineering(BPR) is the analysis and redesign of workflow within and between enterprises. BPR is known by many names such as 'Core Process Re-design' or 'New Industrial Engineering' or 'working smarter'.

The following are some of the basic steps in Business Process Re-Engineering:

(i) **Develop Business Vision and Process Objectives**: BPR is driven by a business vision, which implies specific business objectives such as Cost Reduction, Time Reduction, Output Quality Improvement, Quality of Work Life etc.,

(ii) **Identify the processes to be re-designed**: Most firms use the High-Impact approach, which focuses on the most important processes or those that conflict most with the business vision.

(iii) **Understand and measure the existing processes:** Understanding and measuring the existing processes before redesigning them is especially important.
(iv) **Identify IT Levers:** All of IT's capabilities involve improving coordination and information access across organizational units.
(v) **Design and build a prototype of the new process**: The actual design should not be viewed as the end of the BPR process. Rather, it should be viewed as a prototype, with successive iterations expected and managed.

(b) **Benefits of Branding**: Branding provides benefits to both the Buyers and Sellers.

To Buyer:
- Help buyers identify the product that they like/dislike.
- Identify marketer.
- Helps reduce the time needed for purchase.
- Helps buyers evaluate quality of products especially if unable to judge the product characteristics.
- Helps reduce buyer's perceived risk of purchase.

To Seller:
- Differentiate product offering from competitors.
- Helps segment market by creating tailored images.
- Reduces price comparisons.
- Brand identifies the companies' products making repeat purchases easier for customers.

(c)

Particulars	Option-I	Option-II	Option-III
1. Life Cycle Sales Quantity (units)	5,000	4,000	2,500
2. Life Cycle Selling Price per unit (₹)	400	480	600
3. Life Cycle Sales Revenue (1x2) (₹)	20,00,000	19,20,000	15,00,000
4. Life Cycle Functional Costs:			
a. R&D (₹)	2,40,000	2,40,000	2,40,000
b. Design(₹)	1,60,000	1,60,000	1,60,000
c. Production-One time (₹) Variable	1,00,000 5,000x25=1,25,000	1,00,000 4,000x25=1,00,000	1,00,000 2,500x25=62,500
d. Marketing-One-time (₹) Variable: (₹)	70,000 5,000x24=1,20,000	70,000 4,000x24=96,000	70,000 2,500x24=60,000
e. Distribution-One time (₹) Variable (₹)	50,000 5,000x16=80,000	50,000 4,000x16=64,000	50,000 2,500x16=40,000
f. Customer Service-One-time (₹) Variable (₹)	80,000 5,000x30=1,50,000	80,000 4,000x30=1,20,000	80,000 2,500x30=75,000
Life-cycle-Total Costs (₹)	11,75,000	10,80,000	9,37,500
5. Life Cycle Net Income (₹)	8,25,000	8,40,000	5,62500

Notes: Assume that R&D cost and Design cost represent Total Cost incurred in 2 Years.

Conclusion: The Company may select price of ₹480 to maximize profits.

4. (a) **A Finance Manager is considering drilling a well. In the past, only 70% of wells drilled were successful at 20 metres depth in that area. Moreover, on not finding of water at 20 metres, some persons in that area drilled it further up to 25 metres but only 20%**

struck water at that level. The prevailing cost of drilling is ₹500 per metre. The Finance Manager estimated that in case he does not get water in his own well, he will have to pay ₹15,000 to buy water from outside for the same period of getting water from the well.

The following decisions are considered:
(i) Do not drill any well at all and buy water from outside;
(ii) Drill up to 20 metres; and
(iii) If no water is found at 20 metres, drill further up to 25 metres.

Draw an appropriate decision tree and determine the Finance Manager's optimal strategy. 10

(b) Following information pertaining to tour customers using the same products are available:

Sl. No.	Particulars	A	B	C	D
(a)	No. of units sold	60,000	80,000	1,00,000	70,000
(b)	Selling Price net (₹)	2	3	1	2
(c)	No. of Sales Visits	3	3	5	10
(d)	No. of Purchase Order	20	60	50	40
(e)	No. of deliveries	12	16	25	15
(f)	Kilometers per journey	20	35	10	50
(g)	No. of rush deliveries	---	3	1	2

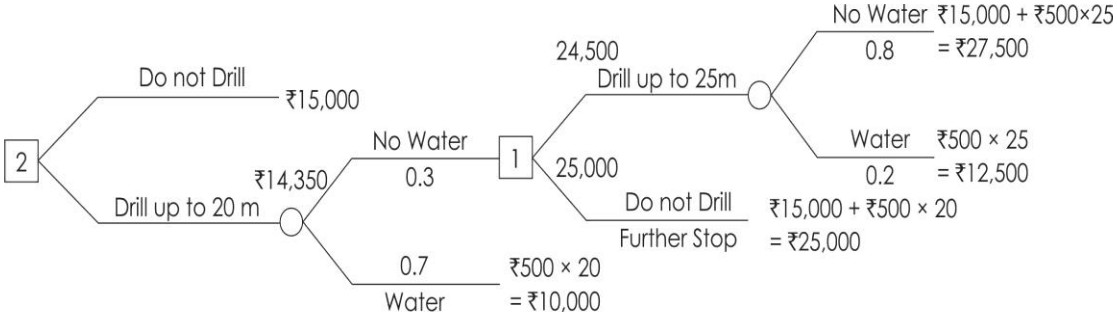
Costs of each activity are as below (in ₹)

(h)	Sales Visit	2,100	Per visit
(i)	Order placing	600	Per order
(J)	Product handling	0.3	Per item
(k)	Normal delivery cost	20	Per kilometer
(l)	Rushed delivery cost	2,000	Per delivery

Ascertain the operating Profit/Net Revenue by each of the four customers?
(2x4)+2 (for conclusion)=10

Answer:

4. (a) Based on the given information, the Decision tree is shown in Figure:



The analysis of the tree is given in the Table as follows:

Decision Node	Options	Expected Cost	Decision
1	Drill up to 25 meters Stop	0.8x27,500+0.2x12,500 = ₹24,500 ₹25,000	Drill up to 25 metres
2	Do not Drill Drill up to 20 metres.	₹ 15,000 0.3x24,500+0.7x10,000=14,350	Drill up to 20 metres

Conclusion: From the analysis table, it may be observed that decision at Node 2 implies that if it is decided to drill up to 20 metres and water is not found, then drilling up to 25 metres should be done. At Node 1, the decision taken to drill up to 20 metres as it involved lower expected cost. Thus the optimal strategy is to drill up to 20 metres and if water is not struck, then drill further to 25 metres.

(b) Statement showing the customer profitability:

Particulars	Computation	A	B	C	D
Revenue net of discount	(a * b)	1,20,000	2,40,000	1,00,000	1,40,000
Less: Costs					
Sales visit	(c * h)	6,300	6,300	10,500	21,000
Order Processing	(d * i)	12,000	36,000	30,000	24,000
Product Handling	(a * j)	18,000	24,000	30,000	21,000
Delivery	(e * f * k)	4,800	11,200	5,000	15,000
Rush Delivery	(g * l)	----	6,000	2,000	4,000
Operating Profit		78,900	1,56,500	22,500	55,000
	Operating Profit/ Net Revenue	66%	65%	23%	39%

Conclusion: The operating Profit/Net Revenue is highest for Customer – A, followed by the Customer – B and subsequently by Customer D and by Customer – C.

Section-B (20 Marks)

IT & Econometric tool in Performance Management
Answer any two questions, each carrying 10 marks.

5. (a) "Data Mining is a process of discovering various models, summaries and derived values from a given collection of data." Discuss it and state the problem of adoption of Data Mining Process. 4

(b) Define the following terms in the context of Supply Chain Management: 2x3=6
(i) Quality
(ii) Promotions
(iii) Strategic Alliance

Answer:

5. (a) **Data Mining:** is a process of discovering various models, summaries and derived values from a given collection of data. Data Mining is not simply a collection of isolated tools, each completely different from the other and waiting to be matched to the problem. In practice, Data Mining becomes an iterative process. One studies the data, examines it using some analytic technique, decides to look at it another way, perhaps modifying it and then goes back to the beginning and applies another data-analysis tool, reaching either better or different results. This can go round and round many times.

The general experimental procedure adapted to data-mining problems involves the following steps:

(i) **Collect the data**: This step is concerned with how the data are generated and collected.
(ii) **Pre-processing the data**: In the observational setting, data are usually 'collected' from the existing data-bases, data warehouses and Data Marts.
(iii) **Estimate the model**: The selection and implementation of the appropriate data-mining technique is the main task in this phase.
(iv) **Interpretation of the model and drawing conclusions**: In most cases, Data-mining

models should help in decision-making.

All phases, separately and the entire data-mining process, as a whole, are highly iterative. A good understanding of the whole process is important for any successful application. No matter, how powerful the data-mining method are, the resulting model will not be valid if the data are not collected and preprocessed correctly or if the problem formulation is not meaningful.

(b) (i) Quality: Stands for conformance to requirements or fitness for use. Quality can be defined through five principal approaches:
- (i) Transcendent quality is an ideal condition of excellence.
- (ii) Product-based quality is based on a product attribute.
- (iii) User-based quality is fitness for use.
- (iv) Manufacturing-based quality is conformance to requirements.
- (v) Value-based quality is the degree of excellence at an acceptable price.

Also, quality has two major components:
- (i) quality of conformance-quality is defined by the absence of defects and
- (ii) quality of design-quality is measured by the degree of customer satisfaction with a product's characteristics and features.

(b) (ii) Promotions: is one amongst the 4 P's viz., Product, Price, Place and Promotion that constitute the set of tools used to direct the business offering to the customer. Promotion is the mechanism whereby information about the product offering is communicated to the customer and includes public relations, advertising, sales promotions and other tools to persuade customers to purchase the product offering.

(b) (iii) Strategic Alliance: is a relationship formed by two or more organizations that share (proprietary), participate in joint investments and develop linked and common processes to increase the performance of both companies. Many organizations form strategic alliances to increase the performance of their common supply chain.

6. (a) Explain the technical and operational factors of E-Commerce. 5

(b) What do you mean by "Software tools/Programming tools? Name some of the tasks that Software tools can do. 1+4

Answer:

6. (a) Technical and Operational Factors of E-commerce

(i) Protocol (Standards) Making Process

A well-established telecommunications and Internet infrastructure provides many of the necessary building blocks for development of a successful and vibrant e-commerce marketplace.

(ii) Delivery Infrastructure

Successful e-commerce requires a reliable system to deliver goods to the business or private customer.

(iii) Availability of Payment Mechanisms

Secure forms of payment in e-commerce transactions include credit cards, checks, debit cards, wire transfer and cash on delivery.

(iv) General Business Laws

The application of general business laws to the Internet will serve to promote consumer protection by insuring the average consumer that the Internet is not a place where the consumer is a helpless victim.

(v) Public Attitude to E-commerce
The public attitude toward using e-commerce in daily life is a significant factor in the success of ecommerce.

(vi) Business Attitude to E-commerce
The willingness of companies to move away from traditional ways of doing business and develop methods and models that include e-commerce is essential.

(b) Software tools, also known as Programming tools are necessary to keeping an organization's technology running without a hitch. Software tools are programs that software developers create, debug, maintain and support other systems. Software tools are usually relatively simple programs that can be combined together to perform more than one task.

Software tools can do any number of tasks like:
- Analyze performance
- Debug
- Check accuracy
- Build applications
- Check and adjust memory usage
- Linking and integrating
- Text editors

There are also Integrated Development Environments (IDE), which combined different software tools into a simpler package that makes it easier to use.

7. (a) What is "Spread Sheet"? What are the terms commonly used to refer to parts of the spread sheet? 2+3
(b) What do you understand by the term "Business Intelligence"? How you would choose the right business solution? 2+3

Answer:

7. (a) Spread Sheet: is a program designed specifically for processing data in tabular form. These data may be numerical or textual. The spread sheet is modeled on the paper device, once used by accountants for tabulating numerical figures- a large sheet of paper spread out to show the financial state of a business. It allows the user to create simple lists and tables of alphabetic or numerical data. It helps to create and manipulate simple data-bases.

Terms commonly used to refer to parts of the spread sheet:
(i) Mouse Cursor: the pointer that in Excel takes the form of a cross
(ii) Active Cell: the current or selected cell
(iii) Cell reference: the unique designator for a cell
(iv) Menu Bar: the horizontal area at the top of the Excel window containing the names of the various "drop-down" menus.
(v) Toolbar: two horizontal areas below the menu bar containing buttons, each with an icon representing the operations performed by the tool;
(vi) Formula: an expression entered into a cell that is designed to be evaluated by the spreadsheet software.

(b) Business Intelligence (BI) is the ways in which we store and use business information. It encompasses the technologies, applications, and means for collecting, integrating, analyzing, and presenting business data. Using data that has been stored in a data warehouse, software applications are able to use this data to report past business information as well as predict future business information, including trends, threats, opportunities and patterns. Popular BI applications are very complex and experts in this field are in high demand. Some of the currently popular enterprise level systems, which can manage information about all of the business functions and systems, are sold and implemented by Oracle, SAP, IBM, and Hewlett Packard (HP). Companies often need in-house experts in these systems to assist with the implementation and the on-going use of these systems, which are quite complex! Business Intelligence is becoming a critically important tool that can allow your company to better understand your customers and suppliers, or measure the efficiency of your own internal operations. If you are new to BI, try reading our Business Intelligence Overview first. Now, it's time to start planning a new BI project. You will need to design the right BI solution for the kind of analysis you plan to do, and evaluate your existing IT infrastructure to ensure that it can support this kind of solution.

Choosing the Right BI Solution:

BI tools offer functionality ranging from simple reports to drill-down analytical solutions targeted at specific industries and operational environments. When choosing a Business Intelligence solution, firms need to ask two key questions; (i) What kind of data needs to be analyzed and where does it come from? Many packaged application and database vendors include some BI functionality in their core product, and if you plan to source all of your data from the same application or database, you may not need to buy additional products. However, this strategy may also limit the analytical range, (ii) Who will be doing the analysis and how do they need to receive the results? Historically, report or analysis requests would be sent to the IT department, which would then code and generate the report. Today, BI is on the front lines of business and the tools may well be used by executives or sales and marketing professionals. As a result, firms need to know the technical capabilities of the end user upfront.

The Business Intelligence Technology Stack: To build a Business Intelligence solution, enterprises will need to consider new investments and upgrades to current technology to build out the BI technology stack. The technology stack is designed to highlight the different layers of technology that will be affected by a BI project, all the way from the hardware hosting your data at the bottom of the stack to the portal product used to present information to users at the top. Starting from the bottom, this seven-layer stack includes:

(i) **Storage and computing hardware**: To implement BI, firms will need to invest or upgrade their data storage infrastructure. This includes Storage Area Networks (SAN), Network Attached Storage (NAS), Hierarchical Storage Management (HSM), and silo-style tape libraries. The trend over the next five years is for storage resources to be amalgamated into a single, policy-managed, enterprise-wide storage pool.

(ii) **Applications and data sources**: To develop an effective BI solution, source data will need to be scrubbed and organized. The challenge is that source data can come from any number of applications, most using proprietary data formats and application-specific data structures. Customer Relationship Management (CRM), Supply Chain Management (SCM), and Enterprise Resource Planning (ERP) systems and other applications are the common sources of data. The trend over the next five years will be for applications to standardize the data format using extensible Markup Language (XML) schema and leverage BI specific standards like XML for Analysis.

(iii) **Data integration**: Middleware allows different systems supporting different communication protocols, interfaces, object models, and data formats to communicate. Firms will need to invest in these "connectors" to allow data from source applications to be integrated with the BI repository. Extraction, transformation and loading (ETL) tools pull data from multiple sources, and load the data into a data warehouse. Again, the trend in data integration and Enterprise Application Integration, in general, is toward standardization through XML and web services.

(iv) Relational databases and data warehouses: Firms will need a data warehouse to store and organize tactical or historical information in a relational database. Organizing data in this way allows the user to extract and assemble specific data elements from a complete dataset to perform a variety of analyses.

(v) OLAP applications and analytic engines: Online analytic processing (OLAP) applications provide a layer of separation between the storage repository and the end user's analytic application of choice. Its role is to perform special analytical functions that require high-performance processing power and more specialized analytical skills.

(vi) Analytic applications; Analytic applications are the programs used to run queries against the data to perform either "slide-and-dice" analysis of historical data or more predictive analyses, often referred to as "drill-down" analysis. For example, a customer intelligence application might enable a historical analysis of customer orders and payment history. Alternatively, users could drill down to understand how changing a price might affect future sales in a specific region.

(vii) Information presentation and delivery products: The results of a query can be returned to the user in a variety of ways. Many tools provide presentation through the analytic application itself and offer dashboard formats to aggregate multiple queries. Also, enterprises can purchase packaged or custom reporting products, such as Crystal Reports. An important trend in BI presentation is leveraging XML to deliver analyses through a portal or any other Internet-enabled interface, such as a personal digital assistant (PDA).

Section-C (20 Marks)
Enterprise Risk Management

Answer any two questions, each carrying 10 marks.

8. (a) "The important principle to consider in an efficient capital market would be that the investors should not hold all their eggs in one basket; they should hold a well diversified portfolio". Do you agree? If so, why? 1+4

(b) Discuss about the Risk Retention. Describe the guidelines that should be followed for retention of the Risk. 1+4

Answer:

8. (a) I agree with the above statement.

In order to diversify risk for the creation of an efficient portfolio (one that allows the firm to achieve the maximum return for a given level of risk or to minimize risk for a given level of return), the concept of correlation must be understood. Correlation is a statistical measure that indicates the relationship, if any, between series of numbers representing anything from cash flows to test data. If the two-series move together, they are positively correlated; if the series move in opposite directions, they are negatively correlated. The existence of perfectly correlated (especially negatively correlated) projects is quite rare. In order to diversify project risk and thereby reduce the firm's overall risk, the projects that are best combined or added to the existing portfolio of projects are those that have a negative (or low positive) correlation with existing projects. By combining negatively correlated projects, the overall variability of returns or risk can be reduced. It shows that a portfolio is containing the negatively correlated projects A and B, both having the same expected return, E, also has the return E, but less risk (i.e., less variability of return) than either of the projects taken separately. This type of risk is sometimes described as diversifiable or alpha risk. The creation of a portfolio by combining two perfectly correlated projects cannot reduce the portfolio's overall risk below the risk of the least risky project, while the creation of a portfolio combining two projects that are perfectly negatively correlated can reduce the portfolio's total risk to a level below that of either of the component projects, which in certain situations may be zero. Combining projects with correlations falling between perfect positive correlation (i.e., a correlation coefficient of +1) and perfect negative correlation (i.e., a correlation coefficient of-1), can therefore reduce the overall risk of a portfolio.

Benefits of Diversification

The gains in risk reduction from portfolio diversification depend inversely upon the extent to which the returns on securities in a portfolio are positively correlated. Ideally the securities should display negative correlation. This implies that if a pair of securities has a negative correlation of returns, then in circumstances where one of the securities is performing badly the other is likely to be doing well and vice versa in reverse circumstances.

Therefore the 'average' return on holding the two securities is likely to be much 'safer' than investing in one of them alone.

(b) **Risk Retention**

This denotes acceptance of the loss or benefit arising out of a risk when it takes place. In short, it is also termed as self insurance. This strategy is viable when the risks are small enough to be transferred at a cost that may be higher than the loss arising out of the risk itself. On the other hand, the risk can be so big that it cannot be transferred or insured. Such risks will have to be phased out when the eventuality occurs. War is an example as also are 'Acts of God' such as earthquakes and floods.

The reasons for risk retention can be cited as follows:

(i) While risk in a business is taken to increase its return, risk retention relates to such risks which have no relation to return but are part of an individual's life or organization or a company operational risk can be cited as such a risk that is inherent and needs to be accepted for retention.

(ii) Sometimes, such risks are so small that they are ignored and/or phased out when they surface.

(iii) This method is also useful when the probability of occurrence is very low and a reserve built within the system over a period can take care of such losses arising out of risk retention. This is normally resorted to in businesses against credit risks that are inherent due to marketing on credit basis.

(iv) In some cases, the subject, who is susceptible to risk, also becomes fully aware of the nature of risk. In these situations, there is a certain amount of preparedness in the system due to risk retention.

Certain guidelines relating to risk retention should be followed:

(A) Determine the risk retention level through proper estimation of risk using sales projections, cash flows, contracts, liquidated damages, and guarantees.

(B) Though there is no precise formula for estimation of risks to be retained, statistical averages of such losses over a period of time give an indication to estimate such losses. For instance, bad debts occurring over a period of time are taken into consideration as an estimate to create a reserve for doubtful debts.

(C) It is also necessary to ascertain the capacity for funding a loss arising out of retained risk that is the measure for transferring the risk beyond that level. Risk retention as an exercise and a strategy is attempted mainly in the case of operational risk in business.

9. (a) Briefly describe about "Value at Risk". 5

(b) "Risk Management Process refers to the process of measuring or assessing risk and then developing Strategies to manage risk. In the risk management, the following steps are taken up to minimize the risk". Discuss the steps which are taken to minimize the risk. 5

Answer:

9. (a) **Value at risk** : 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 etc. 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 lime 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, control and reporting. It can also be used in calculating regulatory capital.

VaR essentially identifies the boundary between normal days and extreme occurrences. The probability level is specified as 1 minus probability of a VaR Break. Normally VaR parameters arc 1 per cent and 5 per cent probabilities and 1 day and 2 week horizons. While VaR represents loss, a negative VaR would indicate that a portfolio has a high probability for making profits.

There are two types of VaR—one is applied primarily in risk management and the other in risk measurement. For a manager who is managing financial risk, VaR is essentially a system and not just a number as it runs periodically and is compared with the movement of computed prices in opening positions over the particular time horizon. An interesting application of VaR is the governance of endowments, trusts and pension plans. VaR utilized for this purpose is to monitor risk. VaR has the advantage of a structured methodology for critically analyzing 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 disaster but an institution that cannot compute VaR will not' according to Aaron 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 analyzed 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.

VaR as a risk measurement is usually reported with other risk measurements such as standard deviation, expected shortfall, partial derivatives of portfolio value, etc. Application of VaR is to segregate extreme occurrences in a systematic way. They can be studied over the long-term in a qualitative manner on the basis of day-to-day movement of prices, both quantitatively and qualitatively. As VaR can at best be utilized to define risk as a market to market loss on a fixed portfolio over a fixed time horizon in normal markets, it is not useful in abnormal situations. 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 of a combined portfolio can be larger than the sum of the VaRs of its components.

(b) Risk management process refers to the process of measuring or assessing risk and then developing strategies to manage risk. In the risk management, the following steps are taken up to minimize the risk:

Step 1: Risk Identification and Assessment: This step involves event identification and data collection process. The institution has to put in place a system of capturing information either through key risk drivers (KRIs) or through a rating system. Once risks are identified, combine like risks according to the following key areas impacted by the risks— people, mission, physical assets, financial assets, and customer/stakeholder trust.

Step 2: Risk Quantification and Measurement: The next step is to Quantify and Measure risks. This means risks according to probability and impact. Various standard tools are used by financial institutions to measure risk and understand their impact in terms of capital or its importance to the organization through a scoring technique.

Step 3: Risk Analysis, Monitor and Reporting: The next step is risk analysis, monitoring and reporting. This will help one to get the big picture and decided on the approach to risk management.

Step 4: Capital Allocation: Risk Analysis, Monitoring & Reporting sends information to the top management of the organization to take strategic decisions. Capital allocation plays key role in management decision making.

Step 5: Risk Management and Mitigation: After the above step, the last step is to make strategic decisions to manage the risk in order to mitigate the risk.

10. (a) Mention the causes of Corporate Failure. Give their examples. 5
(b) Discuss the steps to be taken for preventing the Corporate Failures. 5

Answer:

10. (a) Causes of Corporate Failure:

1. Technological Causes:
Traditional methods of doing work have been turned upside down by the development of new technology. If within an industry, there is failure to exploit information technology and new production technology, the firms can face serious problems and ultimately fail. By using new technology, cost of production can be reduced and if an organization continues to use the old technology and its competitors start using the new technology; this can be detrimental to that organization. Due to high cost of production, it will have to sell its products at higher prices than its competitors and this will consequently reduce its sales and the organization can have serious problems.

   This situation was seen in the case of Mittal Steel Company taking over Arcelor Steel Company. Arcelor Steel Company was using its old technology to make steel while Mittal Steel Company was using the new technology and as a result, Mittal Steel Company was able to sell steel at lower price than Arcelor Steel Company due to its low cost of production. Arcelor Steel Company was approaching corporate failure and luckily, Mittal Steel Company merged with Arcelor Steel Company and became Arcelor Mittal Steel Company, thus preventing Arcelor from failure.

2. Working Capital Problems:
Organizations also face liquidity problems when they are in financial distress. Poor liquidity becomes apparent through the changes in the working capital of the organization as they have insufficient funds to manage their daily expenses. Businesses, which rely only on one large customer or a few major customers, can face severe problems and this can be detrimental to the businesses. Losing such a customer can cause big problems and have negative impact on the cash flows of the businesses. Besides, if such a customer becomes bankrupt, the situation can even become worst, as the firms will not be able to recover these debts.

3. Economic Distress:
A turndown in an economy can lead to corporate failures across a number of businesses. The level of activity will be reduced, thus affecting negatively the performance of firms in several industries. This cannot be avoided by businesses. The recent economic crisis in the USA led to many cases of corporate failures. One of them is the insurance AIG insurance company. It is facing serious problems and it might close its door in the near future.

4. Mismanagement:
Inadequate internal management control or lack of managerial skills and experience is the cause of the majority of company failures. Some managers may lack strategic capability that is to recognize strengths, weaknesses, opportunities

and threats of a given business environment. These managers tend to take poor decisions, which may have bad consequences afterwards. Furthermore, managers of different department may not have the ability to work closely together. There are dispersed department objectives, each department will work for their own benefits not towards the goal of the company. This will bring failure in the company. One example can be WorldCom, where the finance and legal functions were scattered over several states and communication between these departments were poor.

5. Over-expansion and Diversification:
   Research has shown that dominant CEO is driven by the ultimate need to succeed for their own personal benefits. They neglect the objective set for the company and work for their self-interest. They want to achieve rapid growth of the company to increase their status and pay level. They may do so by acquisition and expansion. The situation of over expansion may arise to the point that little focus is given to the core business and this can be harmful as the business may become fragment and unfocused. In addition, the companies may not understand the new business field. Enron and WorldCom can be an example for this situation where the managers did not understand how growing overcapacity would influence its investment and therefore did not comprehend the risks associated with it.

6. Fraud by Management:
   Management fraud is another factor responsible for corporate collapse. Ambitious Managers may be influenced by personal greed. They manipulate financial statements and accounting reports. Managers are only interested in their pay checks and would make large increase in executive pay despite the fact that the company is facing poor financial situation. Dishonest managers will attempt to tamper and falsify business records in order to fool shareholders about the true financial situation of the company. These fraudulent acts or misconduct could indicate a serious lack of control. These frauds can lead to serious consequences: loss of revenue, damage to credibility of the company, increased in operating expenses and decrease in operational efficiency.

7. Poorly Structured board:
   Board of Directors is handpicked by CEO to be docile and they are encouraged by executive pay and generous benefits. These directors often lack the necessary competence and may not control business matters properly. These directors are often intimated by dominant CEO and do not have any say in decision making.

   Example - Enron and WorldCom where poorly structured board was a contributor towards their failure.

8. Financial Distress:
   Firms that become financially distressed are found to be under-performing relative to the other companies in their industry. Corporate failure is a process rooted in the management defects, resulting in poor decisions, leading to financial deterioration and finally corporate collapse. Financial distresses include the following reasons also low and declining Profitability, Investment Appraisal, Research and Development and technical insolvency amongst others.

(b) It is a fact that some companies perform well and that some under-perform and some fails. In many cases, these companies are led by executives, who are quite experienced and competent.

The following are some steps that can be taken for preventing the Corporate Failures:

- **Appointment of non-executive directors**: The non-executive directors will bring their special expertise and knowledge on strategies, innovative ideas and business planning of the organization. They will monitor the work of the executive management and will help to resolve situations where conflict of interest arises. Overall, the non-executive directors will act as a cross-check.
- **Audit Committees**: Very often, there is occurrence of fraud in management and financial reporting. The presence of the audit committees will help to resolve this problem. Audit Committees have the potential to reduce the occurrence of fraud by creating an environment where there is both discipline and control.
- **Development of environment teaming mechanism**: Some organizations fail because they lose touch with their environment. Therefore, to counter this problem, there is a need to develop the environmental learning mechanism. Through it, new information can be brought on continuous basis. This is mainly done by carrying customer-feedback surveys. In this way, the organization can realign itself with the new needs and challenges.
- **Focus on Research and Development**: Organizations can generate new knowledge by investing and focusing more on R&D. Thus, there will be more ideas of making the products better than their competitors.

Apart from the above, the following points will help in preventing Corporate Failure:

- Organizations need a fully effective and functioning conscience.
- Directors need to be vigilant at all times.
- Financial irregularities can have an exceptionally high impact.
- Fresh faces may occasionally be needed at the top of the organization

It can be concluded from above that the Directors have a great responsibility in preventing Corporate Failures. Further Proper Planning is also critical for the success of a business.