

FINAL EXAMINATION

GROUP III

(SYLLABUS 2008)

SUGGESTED ANSWERS TO QUESTIONS

JUNE 2011

PAPER 13 : MANAGEMENT ACCOUNTING - STRATEGIC MANAGEMENT

SECTION – I : STRATEGIC MANAGEMENT - 60 MARKS

Answer Question No 1 and any other two from the rest in this section

- 1 (a) In each of the cases/statements given below one of four alternatives is correct. Indicate the correct answer. 1x10
- (I) Tata Steel's famous advertising campaign of "we also make steel" was meant to gain buyer loyalty to its products:
- (A) Inform new buyers about its products portfolio
 - (B) Enhance product quality perception
 - (C) Achieve corporate social responsibility
 - (D) Charge a price premium
- (II) The acquisition of IPCL, Vadodar by Reliance Petrochemicals would be a good example of;
- (A) Horizontal integration
 - (B) Vertical integration
 - (C) Concentrates diversification
 - (D) Diversification
- (iii) Indian Airlines reducing the airfare on the Delhi-Mumbai sector following the introduction of the no frills airlines would be an example of:
- (A) Cost leadership
 - (B) Price leadership
 - (C) Product leadership
 - (D) Focus
- (iv) Which one of the following is not part of changes in ownership structure?
- (A) Joint venture
 - (B) Exchange offers

- (C) Share repurchases
(D) Leverage buyouts
- (v) Directional Policy Matrix is the same as:
(A) The BCG model
(B) The 9-Cell Matrix
(C) The Life Cycle Portfolio Analysis
(D) The PIMS Matrix
- (vi) Which of the following is not an entry barrier to industry?
(A) Expected competitor relation
(B) Economies of Scale
(C) Customer product loyalty
(D) Bargaining power of suppliers
- (vii) Benchmarking is :
(A) The Analytical tool to identify high cost activities based on the 'Pareto Analysis'
(B) The search of industries best practices that lead to superior performance
(C) The simulation of cost reduction schemes that help to build commitment and improvement of actions
(D) The framework that earmarks a linkage with suppliers and customers
- (viii) Value chain includes:
(A) Customer service, Distribution and Marketing
(B) Production, Product & Services and Process design
(C) Research and Development
(D) All the above
- (ix) Delphi Model:
(A) Develops analogies to the past through judgment
(B) Averages past data to project the future based on the average
(C) Collects and analysis the opinions of the panel of experts
(D) None of the above
- (x) GAP Analysis is the analysis of:
(A) Difference between master budget and flexible budget
(B) Difference between past targets and past performance
(C) Difference between planned targets and existing performance
(D) Difference between past performance and present performance
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- Answer 1{**
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- Answer 1{**
(i)
(ii)

(b) State whether the following statements, based on the quoted terms, are 'TRUE' or 'FALSE' with justifications for your answer. If any statement is false, you are required to give the correct terms, duly quoted. No credit will be given for any answer without justification: 1x5

- (i) Brand loyalty is the differential effect on a customer whose response to a product or services is through the knowledge of the brand comparison with other brands.
- (ii) The degree to which a firm owns its upstream suppliers and its downstream buyers is referred as 'Vertical Integration'.
- (iii) Value migration suggests the need to monitor on a continuous basis to detect and measure the changes happening in value flows between the industries, between companies and between divisions of a company.
- (iv) Through Horizontal Integration a company extends its operation in either backward or forward direction.
- (v) "Strategic Planning" focuses on forecasting the future by using economic and technical tools.

(c) Define the following terms (in not more than two sentences):

1x5

- (i) PPP model
- (ii) Spider Web Strategy
- (iii) Whistle blower policy
- (iv) Merger through absorption
- (v) Leadership strategy

Answer 1(a)

1x10

- (i) C – Achieved Corporate Social Responsibility
- (ii) C – Concentric Diversification
- (iii) B – Price leadership
- (iv) A – Joint Venture
- (v) B – The 9-Cell Matrix
- (vi) D – Bargaining Power of Supply
- (vii) B – The Search for Industries best practices that lead to superior performance
- (viii) D – All of the above
- (ix) C – Collects and analyses the opinions of the panel of experts
- (x) C – Difference between planned targets and existing performance

Answer 1(b)

1x5

- (i) False – It is Brand Equity which represents the differential effect on a customer.
- (ii) True

- (iii) True
- (iv) False – It refers to the degree to which a firm operates in multiple geographic locations at the same point in an industry's value chain.
- (v) False – In "Long Range Planning", there is more use of economic and technical tools. 1x5

Answer 1(c)

- (i) PPP model is a concept of collective approach mooted by Government of India involving government and private agencies / institutions in order to bridge the deficit in infrastructure like railways, road transport and highways, ports, civil aviation, power infrastructure considered to be vital for economic growth.
 - (ii) In "Spider Web Strategy", a small firm establishes a series of joint ventures, so that it can survive and not absorbed by its large competitors.
 - (iii) The company may establish a mechanism for employees to report to the management concerns about unethical behaviour, actual or suspected fraud or violation of the company's code of conduct or business ethics policy.
 - (iv) Merger through absorption signifies a combination of two or more companies into one existing company. In such a case the merging companies lose their identity and their assets, liabilities and shares are transferred to the surviving company.
- 2(a) "Corporate Ethics and Corporate Social responsibility" are two mutually exclusive terms used in implementation of Corporate Strategy. Do you agree? Give necessary reason for your answer.
- (b) What are the strategic options available to the companies pursuing a restructuring strategy?
- (c) Technology forecasting is a crucial input in strategy formulation. Suggest the best method to forecast the technological changes with reasons and explain the method. 5+10+5

Answer 2(a)

The term of Corporate Ethics and CSR are intimately connected, often overlapping, with each other in the context of corporate decisions. In case of a corporate entity an ethical decision is the acceptable decision because it is in the interest of the various stakeholders, including the government, society and organization itself. Since business decisions have an ethical component which induces the managers to take action after weighing the ethical implications, corporate ethics do encompasses CSR in fulfilling the obligations of the corporate body towards the society and the government also. 5

Answer 2(b)

- (i) **Divestment / Withdrawal:** It means pulling out of market. It is an option of getting rid of something when the situation of the firm is such that there is no cash advantage to the company and when the market share is so low that the products no longer viable. Divestment could be selling off a part of a firm's operation or pulling out of certain product –market areas.

A company likes to resort to this strategic option when it desires to reduce the risk or when it desires to release its "liquid resources". Divestment may be considered attractive when the present worth of expected earnings is less than its present worth.

- (ii) **Harvest:** It is strategic option in which the market share is allowed to fall to earn better short term profits. Harvest means a strategy aiming for a lower market share which will give the company its best short run return with a lower term of eventually pulling out of market. This strategic option is appropriate whence the product has a poor market share in declining market. This strategy can be used to gather in funds which can be diverted to other fruitful investment.
- (iii) **Liquidation:** This strategy option is exercised in a situation where the firm finds the business as "unattractive". There could be number of reasons for this. Obsolete equipments and technology may be one of the reasons for unprofitable and dull business. Nobody, including the employees and outside parties, finds in an attractive proposition to revive the firm.
- (iv) **A Niche Strategy:** "Niche" means concentrating around a product and market. It is strategy involving very low degree of risk and represents the typical behaviour of small companies. Such organisations are in general, scared of growing big as it could entail them into legal, labour and management problems. Therefore, they are content with their superior knowledge of local conditions and choose a very narrow segment of market. In India, the government policy has always favored small units.
- (v) **Leadership Strategy:** Under this strategy the company aims to be a market leader in a declining market and above returns for the industry. 2+2+2+2

Answer 2 (c)

In case of forecasting the technological changes, reliable data needed for one of the quantitative techniques are not available. As such, estimation is generic, and is a subject judgment, to be drawn through a process of statistical group response. Thus for any long term technological forecasting at macro level, the Delphi technique is the best suitable method of obtaining expert opinion from a large group of people in a systematic way.

The above technique has three attributes, viz., anonymity, feedback and group response. The Delphi technique is a method of expert opinion from a large group of people in a systematic way. It is mainly required in any long-term technological forecasting at macro level. In Delphi technique:

- Direct interaction is avoided by using programmed sequential questionnaires of three or four rounds.
- The expert is not called to defensives publicly expressed opinion and anonymity of individual forecasters is maintained.
- Subordinates do not have to differ with senior executives face to face.
- The final result is a statistical group response.

- Results are based on interactions combined with controlled feedback.

The final result is a statistical group response. This technique being a modification of the panel or committee approach eliminates the disadvantages of classical committee approach. 5

- 3(a) Describe and critically examine the implications of the term Profit Impact of market Share (PIMS) as an important technique for internal analysis.
- (b) In a competitive business environment, the role of a Management Accountant in relation to Human Resources strategy is crucial. – Discuss highlighting the strategic areas/issues. 10+10

Answer 3(a)

PIMS was developed by General Electric in the 1960s as a technique for internal analysis to identify those strategic factors that most influence cash flow investment needs and success. Its scope was extended by the Harvard Business School and eventually in 1975 the Strategic Planning Institute was established to develop PIMS for variety of clients.

PIMS is a very sophisticated computer model and its database is information submitted by clients. They provide about a hundred pieces of information about the business environment and the competitive position of each product, production process, research and development, sales and marketing activities and financial performance of each business are identified and the information is related back to the client.

PIMS can be used for: a) Evaluating business performance in relation to competitors, and
b) Establishing targets for return on investment and cash flow.

It is claimed that variables in the PIMS models are available to explain some 80% of the variables in the performance of the business involved. According to Buzzel and Gale, PIMS approach is similar to portfolio analysis in the industry; characteristics and strategic position are being seen as important determinants of strategy and strategic success. However, PIMS was designed to explore the impact of a wide variety of strategic and environmental issues on business performance, and to provide principles that will help managers to understand how market conditions and particular strategic choices might affect business performance. 4

Major Findings:

Amongst the most significant findings that have emerged from the PIMS models are the following:

- High investment intensity is associated with low profitability; substantial investments create additional production capacity that companies seek to use. Quite often this results in low prices and low margins for products.
- High productivity and high return on capital are associated
- Additional investment in products and industries are not guaranteed to bring increased profits
- High relative market share has a strong influence on profitability, but is not the only factor
- High industry growth rates absorbed cash and can have a harmful effect on cash flow

- High relative product quality is related to high return on investment
- Product innovation and differentiation lead to profitability particularly in mature markets
- Vertical integration is more likely to prove successful in stable industries than in unstable ones
- The conclusions of the experience curve and sound

Limitations: PIMS has certain drawbacks, which include the following:

1. PIMS assumes that short-term profitability is the prime objective of the organization.
2. The analysis is based on historical data and the model does not take into account future changes in the company's external environment.
3. The model can not take account of interdependencies and potential synergy with organization. Planning technique can be extremely useful, particularly as they force managers and organizations to ask themselves many relevant and searching questions and compile and analyze important information. The techniques do not and cannot, however, provide answers; they merely generate the questions. The danger is that some managers may perceive the output of a technique such as PIMS or a matrix analysis as the answer to strategic issues. 3+3

Answer 3(b)

The Human resources strategies, in a competitive environment, are determined on innovation / quality enhancement / speed / cost reducing strategies. For all these, costs are involved and the HR strategy leads to total cost design. The objectives include the following:

- Cost optimization in man-machine relationship,
- Wage-level structuring,
- Opportunities of outsourcing,
- Automation facilities,
- Job flexibility, etc for the employee's cost / productivity improvement.

The following employee behavioural costs also need to be accounted for;

- (i) **Costing employee absenteeism:** A factor prevalent in all organizations with varying degrees. This factor affects on corporate strategy in two ways:
 - (a) Physical non-availability affects work-ethics, productivity and delivery systems.
 - (b) Financial implication is the cost of total hours lost due to absenteeism including employee benefits as also the cost of over-time paid to substitute workers. The identification of reasons for absenteeism leads to control. Further, benchmarking exercise may reduce absenteeism.
- (ii) **Costing employee turnover:** Generally there are three costs; separation costs, training costs and replacement costs. Certain industries may have very costs in them. Benchmarking

- exercise will help reduce the turnover cost and will be more relevant in cases of certain/particular organizations where turnover is more due to inherent factors than industry related factors.
- (iii) **Cost of change management:** With new strategies formulated and implemented the factors like resistance to change, fear of loss of jobs, cultural trauma etc. tend to stall the change over. The management accountant should quantify the cost transformation through provision of safety net for separating employees, relating costs for existing employees, new employees' recruitment costs, acquiring new competency skilled people etc.
- (iv) **Cost of high performance work practices:** This cost on account of new strategy/performance standards needs to be matched with the benefits thru' productivity improvements. Cost-Benefit analysis of various alternatives, before a decision is taken, needs to be done by Management accountant keeping in view the discounted cash-flows, etc. over a time horizon.

2+2+2+2+2

5x4

4. Write short notes on the following:

- (a) Lean Organisation
- (b) Inclusive Growth
- (c) Societal Marketing
- (d) Strategic role of logistics

Answer 4(a)

Lean Organisation: for years manufacturers have created products in anticipation of having a market for them. Operations have traditionally been driven by sales forecasts and firms tended to stockpile inventories in case they were needed. A key difference in Lean Manufacturing is that it is based on the concept that production can and should be driven by real customer demand. Instead of producing what you hope to sell; Lean Manufacturing can produce what your customer wants with shorter lead times. Instead of pushing product to market, it's pulled there through a system that's set up to quickly respond to customer demand.

Lean organizations are capable of producing high-quality products economically in lower volumes and bringing them to market faster than mass producers. A lean organization can make twice as much product with twice the quality and half the time and space. At half the cost, with a fraction of the normal work-in-progress inventory. Lean management is about operating the most efficient and effective organization possible, with the least cost and zero waste.

5

Answer 4(b)

Inclusive Growth: Rapid and sustained poverty reduction requires inclusive growth that allows people to contribute to and benefit from economic growth. Rapid pace of growth is unquestionably necessary for substantial poverty reduction, but for this growth to be sustained in the long-run, it should be broad-based across sectors, and inclusive of the large part of the country's labour force. Encouraging broad-based and inclusive growth does not imply a return to government-sponsored industrial policies, but instead puts the emphasis on policies that removed constraints to growth

and create a level playing field for investment.

However, a difference between pro-poor and inclusive growth is that the pro-poor approach is mainly interested in the welfare of the poor while inclusive growth is concerned with opportunities for the majority of the labour force, poor and middle-class alike.

Inclusive growth refers both to the pace and pattern of growth, which is considered, interlinked, and therefore in need to be addressed together. The idea that both the pace and pattern of growth are critical for achieving a high, sustainable growth record, as well as poverty reduction lies at the centre of inclusive growth. Inclusiveness – a concept that encompasses equity, equality of opportunity and protection in market and employment transitions – is an essential ingredient of any successful growth strategy.

The inclusive growth approach takes a longer term perspective as the focus is on productive employment rather than on direct income redistribution, as a means of increasing incomes for excluded groups.

5

Answer 4 (c)

Societal Marketing: The Societal Marketing concept holds that a company should make good marketing decisions by considering consumers' wants, the company's requirements, and society's long-term interests. It is closely linked with the principles of 'Corporate Social Responsibility' and of 'Sustainable Development.'

The concept has an emphasis on social responsibility and suggests that for a company to focus on exchange relationship with customers might not be in order to sustain long-term success. Rather, marketing strategy should deliver value to customers in a way that maintains or improves both the customers' and the society's well-being.

The social marketing concept questions whether the pure marketing concept is adequate in an age of environmental problems, resource shortages, worldwide economic turmoil and negative social services. It asks if the firm that senses, serves and satisfies individual wants is always doing what is best for consumers and society in the long-run.

5

Answer 4(d)

Strategic Role of Logistics: In value chain, logistics have two parts:

- (i) Inbound logistics arises through raw materials procurement from vendors to the factory for conversion/assembly.
- (ii) Outbound logistics take place when the finished products or services have to reach the customer from production point. And so operational flexibility is needed for basic customer service. Thus logistics strategy requires integration of :-

- Location structure,
- Warehouse location structure and facilities,
- Transportation economies,
- Inventory economies, and
- Total cost optimization

5

SECTION – II - RISK MANAGEMENT (40 Marks)

Answer Question No. 5 and any other two more from the rest in this section

- 5 (a)** In each of the cases/statements given below one of four alternatives is correct. Indicate the correct answer. 1x5

(i) Risk Management Techniques do not include:

- (A) Risk avoidance
- (B) Risk premium
- (C) Risk retention
- (D) Risk reduction

(ii) ECOR in risk management means:

- (A) Expected cost of ruin
- (B) Expected cost of opportunity loss
- (C) Economic cost of ruin
- (D) None of the above

(iii) Performance related risk measures do not include:

- (A) Operating earnings
- (B) EBITDA
- (C) WACC
- (D) Shortfall risk

(iv) Variability in return on investments in the market is referred to as:

- (A) Market risk
- (B) Physical risk
- (C) Financial risk
- (D) Pooling risk

(v) The instruments that hedge against risk do not include:

- (A) Letter of Credit
- (B) Guarantee
- (C) Underwriting
- (D) Rights issues

- (b)** State whether the following statements, based on the quoted terms, are 'TRUE' or 'FALSE' with justifications for your answer. If any statement is false, you are required to give the correct terms, duly quoted. No credit will be given for any answer without justification: 1x5

(i) CAPM attempts to measure the risk for capital assets of a company.

- (ii) 'Option' a derivative, is used as a hedging mechanism against risk.
 (iii) The IRDA regulates all kinds of insurance related activities in India.
 (iv) EPD in risk management means "Expected Policyholder Deficit".
 (v) Standard Deviation (SD) measures 'risk'.

correct
1x5

Answer 5(a)

1x5

- (i) B – Risk Premium
 (ii) C – Economic Cost of Ruin
 (iii) D – Shortfall risk
 (iv) A – Market Risk
 (v) D – Rights Issue

Answer 5(b)

1x5

- (i) False – CAPM attempts to measure the risk for an efficient portfolio and also the risk-return relationship in the portfolio, both in the aggregate as well as individual securities.
 (ii) False – Option is a two-person contract to buy or sell a specific asset at a specific price within specified period and it needs no protection/hedging against risk.
 (iii) False – IRDA regulates the general insurance covers only life insurance related activities and excluded from its purview.
 (iv) True
 (v) True

- 6 (a) What is Risk? Discuss the important objectives of Risk Management.
 (b) What are the different elements of Corporate risk Governance?
 (c) What are the characteristics of Insurance Exposures?

3+4

5

5

Answer 6(a)

Uncertainty and risk are two terms which are anathema to every manager. Certainty and uncertainty are the two extremities on a continuous platform and risk is identified somewhere between the two extremes. Uncertainty is a totally indefinable happening and is also unexpected.

Risk expressed mathematically is the dispersion of a probability distribution: how much do individual outcomes deviate from the expected outcome. A sample measure of dispersion is a range of possible outcome, which is simply the difference between upper most and the lower outcomes.

This is mathematically measured as Standard Deviation. Physically, risk can be identified as an event which has different probabilities of happening, but the time of the event is not known as also the impact of such risk can vary. While uncertainty can not be quantified, a risk can be

'FALSE' with
correct terms,
1x5

quantified through mathematical models, probability models, correlation etc. and also measured through quantitative models and technological tools. 3

Objectives of Risk Management: It can be classified under two heads:-

(i) Pre-loss objectives:

- Understanding the environment
- Fulfillment of external obligations – statutory requirements
- Reduction in anxiety through necessary preventive measures
- Social obligations to make people aware of the risks

(ii) Post-loss objectives:

- Survival of the organization
- Continuance of the organization's operations
- Initiate and improve the Income/earnings
- Obligations to society and the government

2+2

Answer 6(b)

Responsibility of the corporate body encompasses:

- (i) Identifying the organization's appetite for risk in the areas of capital leverage, credit rating etc.
- (ii) The capability of the organization to manage risk and support its business strategy.
- (iii) Establishing the structural relationship between the roles and responsibilities for risk management.
- (iv) Pooling of risk and develop such integrated risk measures encompasses the various spheres of activity like finance, marketing, human resources and operations.
- (v) Establishing proper tools for risk assessment, measurement and analysis.
- (vi) Developing a proper culture and awareness in the organization through leadership.
- (vii) Educating the various layers of organization about risk absorption and management through case studies.

Corporate governance has become a buzzword in Indian corporate world and SEBI has laid down guidelines in this regard. Every annual report contains a section on corporate governance along with management's discussion on performance and future outlook. 5

Answer 6 (c)

The characteristics for an exposure to be covered by insurance are as follows:

- (i) **Pure risk** – These are classified into personal risk, property risk, liability risk and loss of income risk.

Personal risk - It can happen due to premature death, old age, sickness or disability and unemployment.

Property risk – it can be classified as loss of property, loss of use of property, additional expenses arising out of loss of property.

Liability risk – it can arise as injury to people or damage to property or negligence or carelessness.

Loss of Income risk – consequential loss of income arising out of personal or property loss.

- (ii) **Similar Exposure:** Prediction of losses through application of statistical computations with the help of theory of probability requires a sizable population of similar exposures. This is particularly important in that estimation of probabilities for the happening of an event needs an adequate large sample, as accuracy increases with bigger sample.

- (iii) **Accidental losses:** Insurance contracts allow payments only for accidental losses which beyond the insured's control. Losses taking place unintentionally alone are covered by insurance. Suppression of information of a known risk will not entitle for compensation.

- (iv) **Definite loss:** A definite loss has three facts. It should be recognizable and should be susceptible to verification. The loss should be measurable. This is particularly important in that premium are computed mainly on the estimated qualification of losses.

- (v) **Large loss:** As there is always consideration in the form of a premium for receiving a compensation for a loss, care should be taken that the premium to loss ratio is sufficiently favourable. Insurance tariffs normally from a very small percentage sometime even less than a percent.

- (vi) **Catastrophic losses:** It arises from natural disasters have two main characteristics:-

- (a) They are limited to geographic area where the impact has taken place.

- (b) Prediction of the event is very difficult. For example storms and floods, or earthquakes etc. can create catastrophic losses as such as insurer will have to take special precautions of calculating the premium. Even then the loss may be so huge that the consumers normally resort to sharing the risks through re-insurance as also ensures dispersion of risks over a large geographic area. To estimate the frequency and severity of the catastrophic losses probability analysis is resorted to. 3

- 7 (a) **Hedging** is an important tool by the fund managers in the case of mutual funds. – Explain

- (i) how hedging is done by mutual funds in their products, and

- (ii) how the high risk in equity market can be hedged otherwise. 3+3

- (b) What are the types of 'Project Risk'? Discuss the different methods of measurement of Project Risk. 3+3

Answer 7(a)

- (i) High returns go with high risks and an investor who is risk adverse does not invest in purely equity funds which are prone to high financial risks. To counter this situation the fund managers of the mutual funds take recourse to hedging through the introduction of balance funds where the low risk bonds are balanced by high risk equity investments with proper weightage taking the relevant beta of individual scrip into consideration. 3
- (ii) Investors looking for capital protection and capital appreciation at the same time should look for funds with hedging capabilities. These funds invest in only those equities on which futures and options trading is also allowed. This enables the fund to hedge the equities exposure with an equally opposite exposure in the derivative market. Any rise or fall in the cash market will be taken care by the derivative exposure and reduce the volatility in the fund. 3

Answer 7(b)

Types of project risk: this risk can be classified under three heads:-

- (i) Standalone Risk: This is a quantification of risk of a project when it is viewed in isolation.
- (ii) Corporate Risk: When the project is taken as a part of the corporate entity, its contribution towards the risk of the company.
- (iii) Systematic Risk: This represents the market risk of the project. 3

The project risk can be measured statistically by applying the following methods:

- (i) Range, (ii) Mean absolute deviation, (iii) Standard Deviation, (iv) Co-efficient of Variance (COV) and (v) Semi-Variance.

Out of the above, Standard Deviation can be easily determined. It is widely used to measure the risk as it contains all data relating to its probability distribution. While project risk analysis is attempted, 'what-if' analysis becomes very important to determine the inter-dependencies of the variables. Towards this, sensitivity analysis is a tool, and can be done by the following steps:

- (a) Identify the relationship between basic factors like quantity sold/produced, unit selling price, project life etc. and the Net Present Value (NPV).
- (b) Compute the range of variation and acceptable value of each of the basic underlying factors, and
- (c) Interpret the effect on NPV of variations in the basic variables. 3

For value imputation of the results from the above models the following methods are used for deciding whether the project shall be accepted or rejected:

- (i) Risk Profit method: The dispersion of the probability index of the project is compared with the maximum risk profile, which the management is ready to bear. If the risk of the project is less than the maximum risk acceptable to the management for assumed level of probability index, then the management will proceed with the project.

- (ii) Risk adjusted discount rate method: The risk adjusted discount rate is commonly employed differently for different projects like routine replacement investments, expansion investments, and risky new investments. This is popular method, but entails certain limitations.
- (iii) Certainly equivalent method: The concept of certainly equivalent co-efficient represents the computation of a certain amount equivalent to a probable income or loss. Rather this method introduces the concept of expecting the unexpected and trying to quantify the unexpected profit income or loss with this probability into an equivalent.

8. Write short notes on the following:

5x4

- (a) Use of Exchange Rate Risk Management
- (b) Probability of Ruin
- (c) Portfolio Management

Answer 8(a)

Exchange Rate Risk Management through asset-liability management: At a particular exchange rate assets and liabilities of a financial institution match exactly. As the exchange rate fluctuates this balance gets disturbed. A simple solution to correct this risk is to match assets and liabilities of the same currency. Many financial institutions do not have foreign exchange exposure as all their assets and liabilities are in rupee currency. The risk of foreign exchange borrowings of these institutions are passed on to the lenders through dollar denominator loans. The uncovered loans are hedged at the time of contracting them through forward covers for the entire amount.

Answer 8(b)

Probability of Ruin: It is essentially a study of risk of insolvency for a company with multiple business activity facing heavy claims from creditors. For this purpose, the company is permitted to transfer resources between business lines. But such transfers are restricted by transaction costs. Insolvency and ruin occurs when the negative positions in one or more business lines cannot be compensated by capital transfers. Such problems are normally solved on the basis of intermittent or continuous process. Mathematically, actuarial calculations are involved in such exercise. A clear expression of Laplace transformation of the finite type for computing ruin probability is one such method. Another model developed by Clayton Levy Copulas takes into consideration the interdependence of components of risk.

Answer 8(c)

Portfolio Management: Among the seven components to the enterprise risk management portfolio management is one of them. A portfolio is a combination of different investments that constitutes an investor's total holding. It may be represented investment on stocks or shares or investment in capital projects. Such an investment may be made by an individual or bankers or mutual funds. One of the features of portfolio management is that an investor would analyze the portfolio in its existing and merely one or two in isolation. The principle of portfolio theory can be linked to pooling of risks and diversifying them. Portfolio theory essentially guides an investor to reach an optimal portfolio position. This theory as originally postulated by Harry M. Markowitz

assumes that the utility of the investor is a function of mean return and variance of return or Standard Deviation (Square root of Variance). The expected return of portfolio is simply the weighted A.M. average of the expected returns on the assets constituting the portfolio. The riskiness of the portfolio is measured by the Standard Deviation of the portfolio rate of return which is function of the following:

- (i) the proportions invested in the components,
- (ii) the riskiness of the components,
- (iii) the correlation of the returns on the component securities,

The following are the determinants of the portfolio management:

- (i) The security of an investor,
- (ii) The expected return,
- (iii) The growth prospects,
- (iv) The liquidity power,
- (v) The risk of the market, etc.