FINAL EXAMINATION

GROUP III

(SYLLABUS 2008)

SUGGESTED ANSWERS TO QUESTIONS

JUNE 2015

Paper-13 : MANAGEMENT ACCOUTING-STRATEGIC MANAGEMENT

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

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

(Please answer all parts of a question at one place)

SECTION I (60 marks)

(Strategic Management)

***Answer question No. 1* and any *two* more from the rest in this section.**

1. (a) In each of the cases/statements given below, one of the four alternatives given is most appropriate. Choose the correct answer. (*Answer any ten*) 1×10=10

(i) The following market structure is commonly identified with FMCG products:

(a) Perfect Competition

(b) Monopoly

(c) Monopolistic Competition

(d) Oligopoly

(ii) Sensitivity analysis is a modelling procedure

(a) used in planning where changes are made to the estimates of the variables to see the effect of the outcome.

(b) where assumptions made about the variables are insensitive to changes in the environmental factors.

(c) that assumes no relationship exists between the input variables and the result produced.

(d) that is exclusively used in the implementation stage and not in the planning process.

(iii) Societal marketing is not the following:

(a) a concept that calls for customer orientation

(b) backed by integrated marketing

(c) aimed at generating customer satisfaction

(d) the key to profitable volume in the short-run

(iv) The following is not a requisite of an effective strategy:

(a) Flexibility and cost effectiveness

(b) Creation of a huge organization structure

(c) Responsiveness to global customers

(d) Environment-friendliness

(v) Strategies formed for employee retention by the Human Resources Manager of a production company is

(a) a functional level strategy.

(b) a business level strategy.

(c) a corporate level strategy.

(d) a grand strategy.

(vi) The following is not an example of distinctive competency:

(a) superior product quality on a particular attribute

(b) highly specialized product created for a particular marketing segment

(c) superior R & D feature not provided by competitors

(d) creating an exact copy of the existing growth-stage product

(vii) Switching from one supplier's product to another's is not associated with

(a) having to buy ancillary equipment compatible with the new product.

(b) the loss of the existing supplier's after-sales service.

(c) the risk of lesser reliability of the new supplier.

(d) the seamless migration from one product to another.

(viii) Identify the wrong statement from the following:

(a) Dogs are products in low growth, low market share

(b) Question marks are products in a high-growth, high market share

(c) Stars are products in high growth and high market share

(d) Cash cows are products in low growth, high market share

(ix) The following is not a quantitative tool for demand forecasting:

(a) Delphi Technique

(b) Exponential Smoothing

(c) Correlation

(d) Econometric Models

(x) Conglomerate growth

(a) refers to diversification in related technologically similar field.

(b) relates to forward vertical integration.

(c) refers to unrelated diversification.

(d) refers to backward vertical integration.

(xi) The following is not true:

(a) Objectives are timeless, whereas goals are time-phased.

(b) Objectives are in broad, general terms, while goals are specific.

(c) Objectives are more internal to the organization, while goals are stated in relevant environment external to the organization.

(d) Both objectives and goals can be stated in terms which are quantitatively measured but the character of measurement is different.

(b) State whether the following statements are "True" or "False" with justification for your answer. No credit will be given for an answer without a justification. 1x5=5

(i) A "vision statement" is a statement of intentions of what a company wants to create and through which lines of business.

(ii) International Trade is concerned with exchange of goods and services in non-convertible foreign currencies.

(iii) Market Segmentation is the division of a market with fairly heterogenous subsets, chosen, reached and served by its own tailored marketing mix.

(iv) "Loss Leader" is the leader who is unable to conceptualse and analyse strategic problems.

(v) Supply Chain is the series of internal processes or activities a company performs to produce, design, deliver and support its product.

(c) Define the following (in not more than two sentences) : 1x5=5

(i) Penetration Pricing

(ii) Strategic Business Unit (SBU)

(iii) Delphi Technique

(iv) Product Life Cycle

(v) Total Quality Management

Answer:

1. (a)

(i) — (C) Monopolistic Competition

(ii) — (A) used in planning where changes are made to the estimates of the variables to see the effect of the outcome.

(iii) — (D) the key to profitable volume in the short-run.

(iv) — (B) Creation of a huge organization structure

(v) — (A) a functional level strategy

(vi) — (D) creating an exact copy of the existing growth-stage product

(vii) — (D) the seamless migration from one product to another

(viii) — (B) Question marks are products in a high-growth, high market share

(ix) — (A) Delphi Technique

(x) — (C) refers to unrelated diversification

(xi) — (C) Objectives are more internal to the organization, while goals are stated in relevant environment external to the organization.

Answer:

1. (b)

(i) **False.** A **mission statement** is a statement of intentions of what a company wants to create and through which lines of business.

(ii) **False.** International trade is concerned with exchange of goods and services in **freely convertible** foreign currencies.

(iii) **False.** Market Segmentation is the division of a market with fairly **homogenous** subsets chosen, reached and served by its own tailored marketing mix.

(iv) **False.** Loss leader are the items whose price are cut in case of a price and **promotional strategy** called 'Leader Pricing'.

(v) **False.** **Value chain** is the series of internal processes or activities a company performs to produce, design, deliver and support its product.

Answer:

1. (c)

(i) Penetration pricing:

It is the policy of charging low prices when the product is first launched in order to gain sufficient penetration into the market. It is a policy of sacrificing short term profits in the interest of long term profits.

(ii) Strategic Business Unit (SBU)

This is grouping of related business activities to perform complex planning treatment or plan strategies.

(iii) Delphi Technique:

It is a popular tool for demand forecasting, involving estimation of market demand by questioning a panel of experts.

(iv) Product Life Cycle:

It consists of the stages of a product in a market- from introduction, then to growth, maturity, decline and a phasing out of the market.

(v) Total Quality Management:

TQM is a set of concepts and tools for getting all employees to focus on continuous improvements in the eyes of the customer.

2. (a) What is the purpose of a mission statement of a corporate entity? What are the characteristics of a mission statement? 3+4=7

(b) Write a short note on "product gap". **5**

(c) Explain the concept of "Public Private Partnership" (PPP) in the context of infrastructural development in India. What are the major obstacles faced in the implementation of a PPP project? Suggest ways to overcome these obstacles. **2+3+3=8**

Answer:

2. (a) Purpose of a Mission Statement:

Mission of an organisation can be viewed as a strategic tool and an intellectual discipline which defines organisation's commercial rationale and target market. Missions identify the underlying design, aim or thrust of a company. It is qualitative in nature and may be expressed as a grand design. The mission of an organisation is drawn by its top management and is value based and reflects the vision of the corporate management.

The Mission Statement is a long-term version of what the organisation is trying to achieve. To develop a mission statement, management must take into account certain key elements like the organisation's history. The mission its distinctive competencies and its environment.

Characteristics:

The following are the characteristics of a Mission Statement:

1. **Achievable:** The mission statement should be realistic and achievable. It should open a vision of new opportunities but should not lead the organisation into unrealistic ventures far beyond its competencies.
2. **Specific:** A mission statement must be specific and provide direction and guidelines to the management.
3. **Motivational:** A well-defined mission provides a shared sense of purpose 'outside' of the various activities taking place within the organisation.
4. **Customer focus:** The mission statement should be stated in terms of serving a particular group of customers and meeting a particular class of need rather than on products or services the organisation is offering at present.

Answer:

2. (b) Product Gap:

Gap is the difference between the expectation and the actual output. Product gap is the gap that arises between what the customer expects and what the company offers in its product. This gap is intelligently analysed and attempted to be reduced. Products are improved in terms of features and quality, low costs and increased customer satisfaction. Gaps are analysed with the objective to reduce the gap by forming appropriate strategies. Product line gap is also analysed to find what the industry has to offer and what range of products the company has to offer and the range that the customer expects.

Answer:

2. (c) First part:

The term PPP is the acronym of the expression 'Public Private Partnership' which signifies a sustained collaborative effort between the public sector (government agencies) and private enterprises. PPP has widely been accepted as an alternative form of public infrastructure delivery.

Second part:

PPPs are complex institutional arrangements involving many players from diversified fields; and thus bringing more risks to the infrastructural projects. Some of the obstacles for successful working of the PPP models in India are:

1. Political and bureaucratic constraints such as fragmented decision making due to the involvement of multiple public agencies.
2. The prevalent emphasis on administrative procedures rather than on strategic intent and results.
3. Lack of service integration between different operators and across different segments of an infrastructure project.

Third part:

In any public infrastructure project, there are broadly speaking three main stakeholders involved: (i) Users or beneficiaries (who are part of the larger group of the society as a whole and of the tax-payers); (ii) government (i.e. public sector) and (iii) private sponsors or providers (to which, other actors, like lenders, are related). The interaction between these three stakeholders must be kept into account for structuring PPP projects.

There is also a need for an independent PPP regulator for successful PPP projects. Due to lack of regulatory framework, there have been cases of excessive control of private management, risk sharing arrangements had to be sourced.

Simultaneously, the role of the government should be adequately defined.

3. (a) Describe the impact of globalization on competition. 7

(b) Explain the Ansoff Matrix using the example of a car manufacturing company. 8

(c) Why do new products fail? 5

Answer:

3. (a) Impact of Globalization on Competition:

The impact of Globalization and the International business conditions are having an increasingly significant impact on organization. Some of the impact are:

- They affect the nature of the industry.
- They affect the various position of different countries, the size and wealth of their markets and prosperity and efficiency of their productive bases.
- They affect the management, by governments or International Institutions, of the frame work in which the business is done.
- In times of increasing free trade, firms can expect incoming competition. Further the possibility of competing abroad is also available.
- Firms can source components from overseas.
- Investment flows can also go two ways.
- The barrier between the domestic environment and the international environment is relatively permeable, depending on:
  - the Product
  - the relative openness of the market for the product or of the economy, as a whole.

- Political factors include political conditions in individual overseas markets or sources of supply, relationships between government and the activities of supra-national institutions.
- Economic factors include, for each country
  - the overall level of economic activity and prosperity
  - the relative level of inflation on the domestic and overseas market.
- As well as obvious factors such as language, social and cultural factors include the following:
  - cultural practices, the different levels of education and literacy, religious beliefs and practice and the role of women.

Answer:

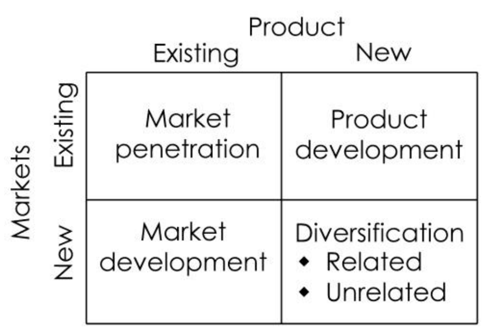
3. (b) Ansoff (1965) demonstrates the choices of strategic direction open to a firm in the form of a matrix.

Market penetration a company could advertise to its existing customers the benefits of upgrading their club membership from regular to VIP. By doing so, the amount of time and effort spent on selling a VIP-based club membership is significantly reduced.

Market Development consider an car manufacturing company who has its case set up in Europe and opens a branch in India to increase the number of car sales and acquire new customers.

Product Development is an car manufacturing company based in India that wants to develop and sell electric bikes in its existing market.

Diversification a car manufacturing company based in India may want to develop and sell electric bikes and electric cars in its existing market (Asia) as well as to a new mark (Europe).



Answer:

3. (c) Why new products often fail?

The following are some of the reasons for the failure of new products:

- Inadequate market analysis and market appraisals
- Insufficient and ineffective marketing support
- Bad timing of new product launching
- Failure to recognize rapidly changing marketing environments
- Absence of formal product planning and development

- Failure of the product to fulfil the customer's needs
- Technical and production problems
- Higher costs than estimated
- Product defects
- Failure to estimate the strength of the competitors
- Too many new products entering the market. **[Any 5 points]**

4. (a) Write short notes on *any two*: 5+5=10

(i) Importance of market orientation to strategic planning

(ii) Backflush Costing

(iii) Cost of Quality

(b) Discuss how the concepts of product positioning, product differentiation and market segmentation relate to each other. 6

(c) What is sensitivity analysis? How is it used? 4

4. (a) (i) The importance of developing a market orientation to strategic planning is implicit in the marketing concept. The marketing concept is the most practical philosophy for achieving any commercial organisation's objective such as growth in profits.

1. By applying the marketing concept to product design, hence to achieve sustained sales growth and so make higher profits.
2. The importance, to some firms, of building up a long-term relationship with customers.
3. With the product concept and selling concept, an organisation produces a good or service, and then expects to sell it.
4. With the marketing concept, an organisation commits itself to supplying what customers need. Marketing orientation enables a firm to adapt to the environment.

(ii) Backflush Costing:

This method of costing is used in conjunction with JIT philosophy. Inventory carrying is considered as a non value- added activity and hence, production is so managed that the flow permits little or no WIP, materials arrive on time and fed into the process. At the end of the production, based on the number of units produced, the detailed bill of materials is assigned the cost. There is a delay in cost recording compared to the traditional method, but since the inventory carrying or build up is absent, the costing system is simplified.

A variant of the back flush is to cost the issues at standard cost and the variances are charged to cost of goods sold. Other variants are accounting for the cost of goods sold rather than completed production and the inventory back flushed by credit to cost of goods sold and corresponding debits to finished goods and WIP.

Backflush costing may undervalue inventory and therefore may be inconsistent with GAAP, except when the differences are not significant.

(iii) Cost of Quality (COQ) is defined as all costs attributable to ensuring quality (prevention and appraisal costs) as well as costs arising out of not maintaining the quality (internal and external failure costs). In a quality conscious and customer-focussed business environment, one must know how much COQ is there in an organisation. The elements of COQ are Preventive Costs (PC), Appraisal Cost (AC), Internal Failure Cost (IFC) and External Failure Cost (EFC).

By controlling and reducing COQ, productivity and profitability can be improved to a significant extent and competitive advantage can be gained by providing better quality products/services at a lower price. Therefore, in order to achieve a higher level of quality, a company should focus on measuring and managing its COQ.

The COQ measure provides cost information that facilitates strategic decisions and overall management. Just like the Japanese companies having outperformed their American competitors In terms of quality, the Indian companies must also try to put emphasis on managing their COQ if they want to outperform their foreign counterparts.

Answer:

4. (b) The three concepts are discussed as under:

Product positioning starts by segmenting the market based on different benefits that each customer group seeks from the product. This can be used to identify opportunities and specify the current and desired positioning of the product or service.

Product differentiation is the act of distinguishing a product from that of its competitors on one or more basic performance parameters or image features like design, quality, etc.

Market segmentation is the act of dividing a market into distinct groups of buyers who might require separate products and/or marketing mixes.

The relationship among these three concepts can possibly be expressed as under:

- The goal of product positioning is to develop a differential product (product differentiation) that creates a unique mind share, particularly in the target market segment.
- When designing the product, quality assurance is incorporated into the features that most affect the desired competitive positioning (market segment) of the product.
- Setting the price for the positioned product, by estimating how much extra quality the product will possess and above the competition and how much the target markets' consumers are prepared to pay for this extra quality over and above the competitor's actual selling price.

Answer:

4. (c) Sensitivity Analysis:

Different managers will have different assumptions and views about what they think will happen or ought to happen. Operating managers, for example, frequently disagree with accountants. All of them will want to see the effect on the outcome of future events if things turn out better or worse than expected. This can be done either with sensitivity analysis or with risk analysis. Sensitivity analysis involves asking 'what if?' questions, it is a modelling procedure used in planning; changes are made to estimates of the variables to establish whether any will critically affect the outcome of the plan.

SECTION II (40 marks)

(Risk Management)

Question 5 is compulsory. *Answer any two* questions from the remaining three questions.

(Please answer all parts to a question at one place)

5. (a) Choose the most appropriate alternative from the given alternatives *(Any any five)*:

1x5=5

(i) Instruments of hedge against risk do not include

(a) Letter of Credit

(b) Guarantee

(c) Underwriting

(d) Rights Issue

(ii) Indemnity clause is not applicable in the case of

(a) Vehicle Insurance

(b) Loss of Profit Insurance

(c) Fire Insurance

(d) Life Insurance

(iii) The following is not an example of pure risk

(a) damage to property by fire

(b) damage to property by flood

(c) an event that could produce either a profit or loss

(d) premature death caused by accident

(iv) Risk management technique does not include

(a) Risk avoidance

(b) Risk premium

(c) Risk Retention

(d) Risk Transfer

(v) The following is not true:

(a) Futures contract has liquidity.

(b) A forward contract is not settled by delivery of the asset on a specified date.

(c) Futures provide an arbitrage opportunity to speculators.

(d) Futures are a special form of forward contracts.

(vi) The Risk Management Group (RMG) of an organization should report to the following, as per best practice

(a) The individual Divisional Heads of the organization

(b) The Insurance Dept. or the Finance Dept. which takes care of insurance in the organization

(c) The Board, through the Audit Committee

(d) The CEO of the organization

(b) State whether the following statements are "True" or "False", justifying your answer. No marks will be given for an answer without a justification. 1x5=5

(i) The values exchanged by the contracting parties in an insurance contract are equal.

(ii) The most commonly used techniques for measuring liquidity risks is the gap analysis of current assets to the maturing liabilities.

(iii) Professional indemnity insurance covers the insured against legal liability towards claims to third parties in respect of accidental death/bodily injury and/or property damage arising out of the specified business of the insured and the legal cost/expenses incurred in connection with the claim.

(iv) Protfolio Management reduces systematic risk.

(v) Financial risk includes trade cycle.

Answer:

5. (a)

(i) — (D) Rights Issue

(ii) — (D) Life Insurance

(iii) — (C) an event that could produce either a profit or loss

(iv) — (B) Risk premium

(v) — (B) A forward contract is not settled by delivery of the asset on a specified date.

(vi) — (C) The Board, through the Audit Committee

Answer:

5. (b)

(i) **False.** The values exchanged by contracting parties in an insurance contract are **unequal** as they depend on chance.

(ii) **False.** The most commonly used technique to measure liquidity risk is the gap analysis of **maturing assets** to maturing liabilities.

(iii) **False. Public Liability Insurance**.

(iv) **False.** Portfolio management reduces unsystematic risk.

(v) **False. Business risk includes trade cycle.**

6. (a) What are the characteristics of insurance exposures? 6

(b) Explain the concept of hedging with the example of an airlines operator. 4

(c) How is the pricing of an insurance product done? 5

Answer:

6. (a) 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.

(a) **Personal Risk** - Can happen due to premature death, old age, sickness or disability and unemployment.

(b) **Property Risk** - Can be classified as loss of property, loss of use of property, additional expenses arising out of loss of property.

(c) **Liability Risk** - Can arise as injury to people or damage to property or negligence or carelessness.

(d) **Loss of Income Risk** - Consequential loss of income arising out of personal or property losses.

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

(iii) **Accidental Losses:** Insurance contracts allow payments only for an accidental loss which is 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 facets. It should be recognisable and should be susceptible to verification. The loss should be measurable. This is particularly important in that premium are computed mainly on the estimated quantification of losses.

(v) **Large Loss:** As there is always a 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 form a very small percentage sometime even less than a per cent.

(vi) **Catastrophic Losses:** Catastrophic losses 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 much difficult. For example, storms and floods or earthquakes etc. can create catastrophic losses as such an insurer will have to take special precautions of calculating the premiums. Even then the loss may be so huge that the consumers normally resort to sharing the risks through reinsurance as also ensures dispersion of risks over a larger geographical area. To estimate the frequency and severity of the catastrophic losses probability analysis is resorted to.

Answer:

6. (b) Hedging: involves the transfer of a speculative risk. It is a business transaction in which the risk of price fluctuations is transferred to a third party, which can be either a speculator or another hedger. For example, an airline faces significant price risk from fluctuation in the price of the jet fuel that it buys. The airline sells airline tickets well in advance of the date on which it promises to transport its passengers. The price that the airline pays for jet fuel on the day that it transports its passengers may either increase or decrease relative to the price on the date that it set its ticket prices, causing either profit or loss. The airline prefers to avoid the price risk and concentrate on its main business operation: transporting goods and passengers. Therefore, on the basis of the quantity of jet fuel it expects to buy, the airline enters into an equal and opposite transaction in the oil futures marker whereby a speculator, in effect, assumes the price risk.

Answer:

6. (c) The process of determining or fixing the rates of premium for a particular product is known as pricing. Traditionally, premiums have been calculated based on tariffs set by the Insurance Regulatory Authority. The rates are derived based on various factors like past loss ratio, location of the asset, type of work as well as exposure to the risks. Rate is the pricing factor upon which the premium is based. For example, car insurance policies are priced based on factors such as make and model of the car, purpose for which the car is used, etc.

Traditionally, for motor insurance the parameters that are used to price a policy have been the model of the car, age of the driver, location of the car and the purpose for which the car is driven, etc. The industry will eventually move from price rating to risk rating. The pricing for each individual will be based on their track record. For example, for 'own damage' in a car insurance policy, the pricing parameters will be the model of the car, driver's age and engine capacity.

The insurance premium can be_broken up into four parts:

(i) Cost of payment for losses

(ii) Cost of operation and maintenance of insurance pool

(iii) Reserve for contingencies

(iv) Return on investment.

In the life insurance, calculation of insurance premium is a very complicated exercise as the variables involved are many, e.g., factors aggravating mortality rates like smoking, drinking, drugs and other habits, age of the insured, occupational hazard, etc. The computation is normally through actuarial computations involving mortality rates. Premium rate is often referred as rate per unit of exposure.

7. Write short notes on any three of the following: 5x3=15

(i) Risk Pooling

(ii) Liquidity Risk Management

(iii) Strategies of Risk Management

(iv) Solvency related measures for risk management

Answer:

7. (i) Risk Pooling:

The concept of pooling risk is the process of identification of separate risks and put them all together in a single basket, so that the monitoring, combining, integrating or diversifying risk can be implemented.

Monitoring becomes easier when the specific agency put in charge knows that all the risks have been identified and they are being monitored according to the system drawn up to quantify the total risk through pooling and with a control figure. i.e., plan the way to monitor, actually monitor, and then check whether there are variations from the monitoring exercise and then act to correct the deviation. This correction act can be combining risks integrating risks or diversifying risks.

For example, whenever a project is put up insurance (Marine insurance) is taken for shipping the various plant and machinery from the manufacturers to the port near the project site. The logistics from the port to the project site is taken care of by the carrier and he insures (transit insurance) the risk for that segment. The material is received at site and stored until erection (storage insurance). During erection of different plant and machinery, mechanical, electrical, etc, risk is covered (erection insurance). The erected plant and machinery is then tested and trial runs are taken for guarantee purposes on continuous run as per the contract. The risk during this period is covered as risks for commercial run. All these risks put together is pooling and is each separate policy has a risk value and premium and conditions attached there to by the insurer and insured has to carry out those obligations. This is the process of monitoring. To reduce risk after pooling it can be combining through a comprehensive policy from the plant and machinery Freight on Board (FOB) to the completion of final commercial guarantee run. Integrating risks will be to take care of all the foreign shipments together, inland transit risks together so that these risks which are similar are taken together.

(ii) Liquidity Risk Management:

It is difficult to measure liquidity risk as it entails expecting likely inflow of deposits, loan dispersals, changes in competitive environment, etc. The most commonly used techniques for measurement of liquidity risks is the gap analysis. The assets and liabilities are arranged according to their maturity pattern in time brackets. The gap is the difference between the maturing assets to the maturing liabilities. A positive gap indicates that maturities of assets are higher than those of liabilities. A negative gap indicates that some rearrangement of funds will have to be done during that time bracket. It can be from sale of assets or issue of new liabilities or rolling over existing liabilities.

(iii) Risk management strategies:

Risk management strategies are seven fold.

They are:

Avoid Risk,

Reduce Risk,

Retain Risk,

Combine Risks,

Transfer Risk,

Sharing Risk and
Hedging Risk.

Avoid Risk: Avoid risk is the prevention method and proven method. This method results in complete elimination of exposure to loss due to a specific risk. It may involve avoidance of an activity which is risky.

Reducing Risk: Reduction of risk is attempted to decrease the quantum of losses arising out of a risky happening e.g., earthquake, storm, floods, etc. Risk reduction can be achieved through Loss Prevention and Loss Control.

Retain Risk: Risk retention is adopted when it cannot be avoided, reduced or transferred. It can be a voluntary or involuntary action. When it is voluntary it is retained through implied agreements, involuntary retention ensures when the organization is unaware of the risk and faces it when it comes up.

Combine Risks: When the business faces two or three risks the over all risk is reduced by a combination. This strategy is prevalent mainly in the area of financial risk. Different financial instruments being negative risk return of co relation like Bonds and Shares are taken in a single port folio to reduce the risk. A physical risk of non- availability of a particular material is often solved by having more than one supplier.

Transfer Risk: Normally in projects assignments or multifaceted exercises, execution is fought with risks. Different agencies work together and these agencies take care to transfer risk in their areas to another agency which is better equipped to take care of a risk for a consideration. Here the concept of core competence curves in and whenever a particular agency, individual or a firm finds that it is dealing in a area where it does not have the core competence to deal with it seeks the help of another agency which has the specific core competence to transfer its own risk. The risk may be in the form of loss of reputation or sub quality performance and this risk is taken care of through transfer.

Sharing Risk: Insurance is a method of sharing risk for a consideration, viz., premium insurance loss, undertakes to share the risk with the companies and share their own risk through re-insurance with other companies. Sometimes big conglomerates share risk among their own group of companies in proportion to their risk bearing strengths by creating a corpus instead of paying premium to insurance companies.

Hedging Risk: Exposures of funds to fluctuations in foreign exchange rates, interest rates, prices, etc. bring about financial risks resulting in losses or gains. The downside risk is often taken care of by hedging. Hedging is done by an agency taking over the risk for a consideration for a period and select band of fluctuation.

Risk optimization: Risk optimization means utilizing information on risk to compute precisely what types and combinations of risk to take. It also develops the precise trade off between risk and reward and the corresponding appropriate product pricing to reflect the risk taken. **[Any 5 points]**

(iv) Solvency related measures for risk management:

Solvency-related measures (these measures concentrate on the adverse "trail" of the probability distribution - and are relevant for determining economic capital requirements)

Probability of ruin - the percentile of the probability distribution corresponding to the point at which the capital is exhausted.

Shortfall risk - the probability that a random variable falls below some specified threshold level. (Probability of ruin is a special case of shortfall risk in which the threshold level is the point at which capital is exhausted.)

Value at risk (VAR) - the maximum loss an organization can suffer, under normal market conditions, over a given period of time at a given probability level. VaR is a common measure of risk in the banking sector, where it typically calculated daily and used to monitor trading activity

Expected policy holder deficit (EPD) or economic cost of ruin (ECOR) - an enhancement to the probability of ruin concept (and thus shortfall risk and VaR) in which the severity of ruin is also reflected. Technically, it is the expected value of the shortfall.

Tail Value at Risk (Tail VaR) or Tail Conditional Expectation (TCE) - an ECOR-like measure in the sense that both the probability and the cost of "tail events" are considered.

Tail events - unlikely but extreme events, usually from a skewed distribution. Rare outcomes, usually representing large monetary losses. **[Any 5 points]**

8. (a) Explain the Utility Theory in Risk Management. **6**

(b) Explain the following concepts:

(i) Risk Avoidance **3**

(ii) Self Insurance **3**

(iii) Hold - Harmless Agreements **3**

Answer:

8. (a) The relevance of Utility Theory in risk management may be explained as under:

The destruction caused by any unforeseen event is referred to as "Risk". In the insurance business, people exposed to the same risk form a group and share the loss together. Insurance companies collect the shares (Premiums) in advance from the group and create the fund. This fund is utilised to pay for the loss (Claims) that is incurred by any member of the group.

Risks can be classified into various types:

(a) Financial and non-financial risks.

(b) Dynamic risks

(c) Speculative risks.

Risks cannot be avoided through insurance but insurance may be considered as a means to transfer the risk. It is also a mechanism to compensate the financial and economic loss due to risk. Safety measures and damage control management can be adopted to mitigate or eliminate the magnitude of risk. The fundamental principle of insurance is to share the losses and to substitute uncertainty with certainty.

Expected utility theory emphasises that the demand for insurance is a demand for certainty. The conventional specification of the theory perceives that the buyers of insurance prefer certain losses to actuarially equivalent uncertain losses. But certain other surveys indicate that individuals actually prefer uncertain losses to actuarially equivalent certain losses. This can be explained by stating that "the purpose of any insurance policy is to convert an uncertain, but potentially large loss into a certain small loss. Such a conversion benefits the consumer, if greater losses cause progressively larger declines in utility (i.e., if there is diminishing marginal utility of wealth). For example, insurance against fire peril where bigger part of the loss will be insured that is uncertain for a specific premium today.

Another approach evaluates a conventional expected utility theory explaining the demand for insurance by an individual demanding for an uncertain payoff of income in a pre-specified state. This can be explained through the demand for health insurance. According to this theory, becoming ill fundamentally changes preferences. Thus an insured customer is able to transfer income into the ill state where the marginal utility of income is greater.

Answer:

8. (b) (i) Risk Avoidance:

Risk avoidance is a conscious decision not to expose oneself or one's firm to a particular risk of loss. Avoidance is not always feasible. It may not be desirable even when possible, since it entails giving up some benefits that may accrue on a venture that is avoided due to risk avoidance. Avoidance always goes together with relinquishment of potential profits. The costs in the form of relinquishments should be weighed against the benefits of risk avoidance before a conscious decision is taken.

(ii) Self Insurance:

This term does not involve a transfer of risk unlike the term "insurance". The organization decides not to transfer the risk, but instead plans its internal finances in such a manner that it is able to use its funds set apart for the losses that were probable.

If a firm has a group of exposure units large enough to reduce risk and thereby predict losses, the establishment of a fund to pay for those losses is a special form of planned funded retention known as self- insurance.

The two necessary elements for this type of insurance are (a) the existence of a group of exposure units that is sufficiently large to enable accurate loss prediction and (b) prefunding of expected losses through a fund specifically designed for that purpose.

(iii) Hold- Harmless agreements:

Provisions inserted into different kinds of contracts can transfer responsibility for some types of losses to a party different from the one that would otherwise bear it. Such provisions are called hold- harmless agreements or sometimes indemnity agreements. The intent of these contractual clauses is to specify the party that will be responsible for paying for various losses.