

CA



THE INSTITUTE OF  
**CHARTERED** ACCOUNTANTS  
OF SRI LANKA

# **SUGGESTED SOLUTIONS**

## **22404 – Business Strategy and Knowledge Management**

CA Professional (Strategic Level II) Examination  
June 2013

**THE INSTITUTE OF CHARTERED ACCOUNTANTS OF SRI LANKA**

## **Answer No. 01**

- a) Business Acquisition has been a successful strategy for market consolidation. Evaluate the reasons for Dunhill to pursue in acquisitions strategy and the likely problems associated in achieving success.

(10 marks)

### **Reasons for acquisitions**

Increased market power – primary reason is to achieve greater market power. Many firms have core competencies but lack the size to exercise their resources and capabilities. Market power is usually derived from the size of the firm and the firm's resources and capabilities to compete in the market place.

Overcome entry barriers – this represent factors associated with the market currently operating in the market that make it more expensive and difficult for a new firm to enter that market. It may be difficult to develop a new venture in a market because large and established competitors may already occupy the niche of interest.

Cost of new product development – the development of new products internally and the start-up of new ventures can be quite costly and require significant time to develop the products and achieve a profitable return.

Increased speed to market – can increase their speed to market by pursuing an acquisition rather than new product development.

Lower risk compared to developing new products – internally developed new ventures can be quite risky. New ventures have high failure rates and longer to achieve adequate cash flows and profitability.

Increased diversification – the firm may find it easier to develop new products and new ventures within its current market because its managers better understand the products and the market. However, it is often more difficult for a firm to develop new products that are quite different from its existing set of products and to enter new markets because its managers may have less understanding of such markets.

Avoid excessive competition – firms use acquisition to move into related and unrelated markets to decrease dependence on markets with substantial competitive pressure, frequently from foreign firms.

### **Problems in Achieving Success**

Integration difficulties – integrating two companies after an acquisition can be quite difficult. Among the problems that can arise are melding two disparate corporate cultures, linking different financial and control systems, building effective working relationships and resolving problems regarding the status of acquired firm executives.

Inadequate evaluation of target – potential problem is firm may pay too much for an acquisition. If a firm does not thoroughly analyse the target and fails to develop adequate knowledge of its market value, too much money may be offered to acquire it.

Large or extraordinary debt – acquisitions that completed in 1980s and 1990s were financed with significant debt. Firms are encouraged to take on significant debt because it was believed to positively discipline managerial actions. A substantial amount of evidence suggests that when a firm has significant debt, managers forgo investments that are likely to have long-term payoffs.

Inability to achieve synergy – significant problem in achieving success with acquisitions is assessing the potential synergy involved and the benefit of such synergy. To achieve a competitive advantage through an acquisition, a firm must realize private synergy and core competence that cannot be imitated easily by competitors.

Too much diversification – research suggests that the long-term performance of many acquisitions is not positive. When a firm becomes over diversified, it is difficult to manage effectively.

When this occurs firms performance usually suffers. Further, too much diversification through acquisition creates significant problems for the management of the firm. Top level managers may not effectively manage each of the businesses and maintain strategic competitiveness.

Managers overly focused on acquisitions – an active acquisition strategy often requires much managerial time and energy. Process of making acquisitions requires extensive preparation and sometimes lengthy negotiations. Therefore executives may become overly focused on the process. Such focused energy can divert managerial attention from other important matters within the firm, particularly those that are long term in nature and require significant time and attention.

(b) The main goal of a corporate restructuring, in most cases, is to gain or regain strategic control of the firm. This generally produces higher performance and achieves strategic competitiveness over the long term. Examine alternative approaches that were available to Dunhill for restructuring and their short-term and long-term outcomes.

(10 marks)

### **Downsizing**

Downsizing is a reduction of in the number of employees, and sometimes in the number of units, but it may or may not change composition of businesses in the corporation's portfolio. Many of the companies including fortune 1000 firms have implemented some downsizing. The intent of these downsizing was to become "lean and mean" towards achieve strategic objectives sustainably. But the research has shown many companies that downsized did not achieve these goals. The reason had been the required in depth analyse of operational capabilities and challenges to meet after the downsizing not receiving the due consideration.

### **Downscoping**

Downscoping refers to divestiture, spin-offs, or some other means of eliminating business that are unrelated to firm's core businesses. This is often referred to strategically refocusing on the firm's core businesses. A firm that downscope often also downsizes but it does not eliminate key

employees from its primary businesses, which could lead to loss of core competence. The firm reduces its size by reducing the diversity of businesses in its portfolio. When accomplished, the top management team can more effectively manage the firm. This is because the firm becomes less diversified, and the top management team can better understand and manage the remaining businesses, primarily the core and other businesses. Downscoping meet more success due to the above.

**Leveraged Buyouts (LBO)**

LBO is a restructuring action whereby the managers of the firm and an external party buys all of the assets of the business, largely financed with debt, and takes the firm private. Although downscoping is a prominent and generally successful restructuring strategy, LBO has received significant attention in the popular press and the business world. The firm is bought by a few owners often in partnership associations, primarily by obtaining significant amount of debt. Oftentimes the new owners of the LBO firm also sell a significant number of assets after the purchase and, in so doing, downscope the firm. There are three types of LBO: management buyouts (MBO), employee buyouts (EBO) and LBO.

*Students can be discussed following with brief description.*

Strategic outsourcing, franchising, strategic alliance, diversification, retrenchment strategy, joint venture etc.,

**Short-term and Long-term outcomes**

<b>Short-term Outcomes</b>	<b>Long-term Outcomes</b>
<ul style="list-style-type: none"> <li>• Reduced labour costs</li> </ul>	<ul style="list-style-type: none"> <li>• Loss of human capital</li> </ul>
<ul style="list-style-type: none"> <li>• Reduced debt cost</li> </ul>	<ul style="list-style-type: none"> <li>• Lower performance due to slacking the focused attention</li> </ul>
<ul style="list-style-type: none"> <li>• Emphasis on strategic controls</li> </ul>	<ul style="list-style-type: none"> <li>• Emphasis on higher performance</li> </ul>
<ul style="list-style-type: none"> <li>• High debt costs</li> </ul>	<ul style="list-style-type: none"> <li>• Higher business risk</li> </ul>

**Alternate approaches**

**Diversification**

Diversification strategy is a corporate growth strategy in which an organization grows by moving into a different industry. Any move into a different industry automatically makes an organization a multiple-business organization because it's no longer operating in just one industry.

Diversification can be viewed by focusing on two specific types of actions

- Product diversification – a firm operates in multiple industries simultaneously.
- Geographic market diversification – a firm operates in multiple geographic markets simultaneously.

## **Note 01**

- Related diversification
  - Unrelated diversification
- } with brief description

### **Strategic Outsourcing**

- Strategic Outsourcing allows one or more of a company's value-chain activities or functions to be performed by independent specialised companies that focus all their skills and knowledge on just one kind of activity.
- Strategic Focus on a fewer number of value-creation activities in order to strengthen its business model. It focus on noncore or nonstrategic activities in order to determine if they can be performed more effectively and efficiently by independent specialized companies. If a firm has pursued extensive strategic outsourcing it is called as Virtual Corporation.

### **Strategic Alliance**

A strategic alliance is a voluntary, long term cooperative relationship between two firms designed to achieves specific objective through shared resources. Strategic alliance can be grouped into three broad categories as;

- Non-equity alliances - the cooperating firms agree to work together, but they do not take equity position in their partner's firm or form any independent organizational unit to manager their corporate efforts. This includes patent licensing, supply or distribution agreements.
- Equity alliance – Here cooperating firms supplement their contract with equity holdings in the alliance partners.
- Joint ventures – here the cooperating firms create a legally independent firm in which they invest and from which they derive their share of any profits created.

### **Joint Ventures**

Two firms (or more) join forces for manufacturing, financial and marketing purposes and each has a share both the equity and the management of the business.

### **Franchising**

Is a method of expanding the business on less capital than would otherwise be possible. For suitable businesses, it is an alternative business strategy to raising extra capital for growth. Franchisers include Holiday Inn, KFC, Body Shop and even McDonald's. The franchiser and franchisee each provide different inputs to the business.

### **Retrenchment Strategy (Defensive Strategies)**

Retrenchment strategy is a defensive strategy of an organization. This strategy is followed when an organization aims at a contraction of its activities through substantial reduction or the elimination of the scope of one or more of its businesses in terms of their respective customer groups, customer function, or alternative technologies either singly or jointly in order to improve its overall performance. In other words this strategy adopts to reduce its manpower and other



## Consortia

Organizations co-operate on specific business areas such as purchasing or research.

## A licensing Agreement

a commercial contract whereby the licensor gives something of values to the licensee in exchange for certain performances and payments.

## Answer No. 02

- (a) Toyota is a highly globalised company and approximately 35 percent of the firm's global output is generated from wholly or partially owned affiliates in over 25 countries in Europe, Asia and America. Sony Corporation is another example of a highly globalised and successful company. Identify and describe the two types of International Strategy emphasizing key features

(4 marks)

**International Business Level Strategy** – is an integrated and coordinated set of commitments and actions designed to provide value to customers and gain a competitive advantage by exploiting core competencies in specific, individual product markets. Customers are the foundation of successful business-level strategies. When selecting a business level strategy, firms evaluate two types of competitive advantage: lower cost than rivals or the ability to differentiate and command a premium price that exceeds the extra cost of doing so. Therefore at the business level strategies firms follow low cost, differentiation, focused low cost or differentiation, and integrated low cost or differentiation.

**Feature** – in pursuing the international business level strategy, the home country of operation is often the most important source of competitive advantage. The resources and capabilities established in the home country often allow the firm to pursue the strategy beyond the national boundary.

**International Corporate Level Strategy** – is action taken to gain a competitive advantage through the selection and management of a mix of businesses competing in several industries, countries or product markets. In essence, a corporate level strategy is what makes “the corporate whole adds up to more than the sum of its business unit parts”. International corporate level strategy is distinguished from international business level strategy by the scope of operation in both product and geographic diversification. The business level strategies, to a degree, depend on the type of international corporate level strategy the firm is following. Some corporate strategies give individual country units the authority to develop their own strategies whilst other corporate strategies require business level strategies to be compromised because of guidance from Head-office rather than by business or country.

**Feature** – International corporate level strategy is required when the level of product complexity increases to multiple industries and multiple countries or regions.

- (b) In pursuing an international strategy the home country of operation is often the most important source of competitive advantage. The resources and capabilities established in the home country often allow the firm to pursue the strategy beyond the national boundary. Evaluate the above using The Competitive Advantage of Nations by Michael E. Porter.

(6 marks)

**Factors of production** – refers to the inputs necessary to compete in any industry, such as labour, land, natural resources, capital and infrastructure. Of course there are advanced factors such as digital communication systems etc. There are also generalized (highway systems, supply of debt capital) and specialized factors (skilled labour in specific industry such as a port). If a country has both advanced and specialized production factors, it is likely that this will serve an industry well in developing strong home-country competitors that can become successful global competitors.

**Demand conditions** – nature and size of the buyers needs in the home market for the industry's goods or services. The sheer size of a sales segment could produce the demand necessary to create scale efficient facilities. This efficiency could also lead to domination of the industry in other countries. However, specialized demand may also create opportunities beyond national boundaries.

**Related and supporting industries** – is the third dimension in the model. Italy has become the leader in the shoe industry because of related and supporting industries. The leather supplies necessary to build shoes are furnished by a well established industry in leather processing. Many people travel to Italy to purchase leather goods thus supporting the distribution.

**Firm strategy, structure and rivalry** – the final country dimension also fosters the growth of certain industries. The pattern of firm strategy, structure, and rivalry among firms varies greatly from nation to nation. In the United States, competition among computer manufacturers and software producers has favored the development of these industries. Similarly in Italy, the national pride of its designers has developed strong industries in sport cars, fashion apparel, and furniture.

- (c) Some corporate strategies give individual country units the authority to develop their own strategies whilst other strategies require compromise because of home office direction to accomplish standardization of products and sharing of resources across the countries. Identify and describe the International Corporate Level Strategies businesses adopt according to markets.

(5 marks)

**Multidomestic Strategy** – is one in which strategic and operating decisions are decentralized to the strategic business unit in each country in order to tailor products to the local market. A Multidomestic Strategy focuses on competition within each country. It assumes that the markets differ and therefore are segmented by country boundaries. In other words, consumer needs and desires, industry conditions, political and legal structures, and social norms vary by country. However, Multidomestic strategies do not allow for the achievement of economies of scale and thus can be more costly.



**Global Strategy** – assumes more standardization of products across country markets. As a result competitive strategy is centralized and controlled by the home office. The strategic business units operating in each country are assumed to be independent, and the home office attempts to achieve integration across these businesses. Therefore, a Global Strategy is one in which standardized products are offered across country markets and competitive strategy is dictated by the home office. Thus, a global strategy emphasizes economies of scale and offers greater opportunities to utilize innovations developed at the home office or in one country. However, a global strategy often lacks responsiveness to local markets and is difficult to manage because of the need to coordinate strategies and operating decisions across country borders.

**Transnational Strategy** – is a corporate level strategy that seeks to achieve both global efficiency and local responsiveness. Realizing the diverse goals of the transnational strategy is difficult because one goal requires close global coordination, while the other requires local flexibility. It requires building a shared vision and individual commitment through an integrated network. In reality, it is difficult to achieve a pure transnational strategy because of the conflicting goals.

### **Answer No. 03**

Organizational capabilities emerge from a process of consciously knitting together the efforts of different work groups, departments, and external allies not from how the boxes on the organization chart are arranged. During the past decade, new strategic priorities and rapidly shifting competitive conditions have triggered revolutionary changes in how companies are organizing the work effort.

(a) Examine the facts that support the emerging organizational structures of the future (5 marks)

Many of today's companies are winding up task of re-modeling their traditional hierarchical structures once build around functional specialization and centralized authority. The change was driven by growing realization that command and control hierarchies were proving a liability in business where customers' preferences were shifting from standardized products to custom orders and special features product lifestyles.

In today's fast changing markets where many companies are racing for global leadership in their industries and/or racing to build strong positions in the industries of the future, the necessary organizational themes are lean, flat, agile, responsive and innovative. The necessary tools of organizational design are managers and workers empowered to act on their own judgment, reengineered work processors, self directed work terms, rapid incorporation of internet technologies, and networking with outsiders to improve existing organizational capabilities and create new ones.

The necessary organizational imperative is building a company capable of outcompeting rivals on the basis of superior resource strength and competitive capabilities that are increasingly based on intellectual capital.

Therefore the organisation of the future will have several new characteristics:

- Fewer barriers between different vertical ranks, between functions and disciplines, between units in different geographical locations, between company and its suppliers, distributors, strategic allies, and customers
  - A capacity for change and rapid learning
  - Collaborative efforts among people in different functional specialties and geographic locations
  - Extensive use of e-commerce technology and e-commerce business practices, real-time data and information systems, internet based communication systems etc.,
- (b) Successful strategy implementers inspire and challenge employees to do their best. They get employees to buy in to the strategy and commit to making it work. They structure individual efforts into team and work groups in order to facilitate an exchange of ideas and foster a climate of support. Identify and comment briefly on balancing positive and negative motivational consideration in executing strategic initiatives.

(5 marks)

If an organizations' motivational approach and reward structure induces too much stress, internal competitiveness, and job insecurity, the impacts on work force morale and strategy execution can be counterproductive. Evidence shows that a manager's push for improving strategy execution should incorporate more positive than negative motivational elements because people tend to respond with more enthusiasm, efforts, creativity and initiative.

Yet it is unwise to completely eliminate pressure for good individual and group performance and the stress and anxiety it evokes. There is no evidence that a no pressure work environment leads to superior strategy execution or sustained high performance. Successful strategy implementers allow employees to participate in making decisions about how to perform their jobs, and they try to make jobs interesting and satisfying.

They devise strategy supportive motivational approaches and use them effectively. Some of them include:

- Providing employment security is a valuable contributor to worker productivity and company loyalty, elect not to lay off factory workers but instead put them out in the field sell vehicles when business slacks off for a period.
- Provide stock option to all employees. Having employee owner who share in a company success is widely viewed as positive motivator.
- Offer higher daily wages than the competitors plus a commission on each sale. Also allow employees to go out satisfy their customers using their own best judgment.
- Let all the employees wear one uniform. There are no reserved places in car parking lot, there is no executive dining room – everyone eats in the same plant cafeteria. There are only two job classifications for skilled trade and one job classification for all other workers.
- Motivational power of self-managed teams who achieve very good results. Team performance gets enhanced because team members put considerable peer pressure on co-workers.

- (c) Incentive compensation for top executives is typically tied to company profitability, earnings growth ROI etc. incentives for departmental heads may be tied to performance outcomes more closely related to their strategic area of responsibility. Prepare a guideline for creating an incentive compensation system targeting successful execution of strategy. (5 marks)
- a. The performance payoff must be a major, not minor, piece of the total compensation package. Payoffs must be at least 10 to 12 percent of base salary to have much impact.
  - b. The incentive plan should extend to all managers and all workers, not just top management. It is a gross miscalculation to expect that lower-level managers and employees will work their hardest to hit performance targets just so a few senior executives can get lucrative rewards.
  - c. The reward system must be administered with scrupulous care and fairness. If performance standards are set unrealistically high or if individual /group performance evaluations are not accurate and well documented, dissatisfaction with the system will overcome any positive benefits.
  - d. The incentive must be tightly linked to achieving only those performance targets spelled out in the strategic plan. Incentive should not include factors that get thrown in because they are thought to be nice occurrences.
  - e. The performance targets each individual is expected to achieve should involve outcomes that the individual can personally affect. The role of incentive is to enhance individual commitment and channel behavior in beneficial directions.
  - f. Keep the time between performance review and payment of the reward short. A lengthy interval between review and payment breeds discontent and works against reinforcing cause and effect.
  - g. Make liberal use of nonmonetary rewards; don't rely solely on monetary rewards. When used properly, money is great motivator, but there are potent advantages to be gained from praise, special recognition and so on.

(Total 15 marks)

**Answer No. 04**

- (a) In addition to the indicated IT systems in the above description, what other IT systems do you propose to facilitate the decision making process and to improve the business functions of the organisation. Propose three (03) such IT systems and explain why you propose each one of them. (6 marks)
1. **Accounting and Finance systems**: to facilitate financial decision making such as course fees, salaries, capital expenditure for improvements, student facilitation services, etc.

2. **Student registration and administration systems** (this may be proposed by those who consider that an LMS, which is given in the description, is for learning purposes and this system is for administrative purposes. Those who consider that LMS has these functions may not propose this): to facilitate better student administration, allocation to different classes and course subjects, learning requirement management, lecturer workload estimations, learning resource allocation estimations, timetabling, etc.
3. **Customer Relationship Management (CRM) systems**: for better feedback processing, surveys, complain management, promotional and advertising activities, etc.
4. **Human Resource Management (HRM) systems**: for better staff management, improvement of the administration, service excellence, etc.
5. **Supply Chain Management (SCM) systems**: for managing external parties who may provide services for learning content and material development, books and study pack printing, supply of books for the library, food and canteen facilities, furniture and other equipment, etc.

Exports systems/Decision Support Systems/Management Information Systems also considered as correct answers wish correct explanation for reason.

- (b) In order to improve the service levels of the ABCI, in what way can a knowledge based system (KBS) be used? To explain your answer, consider the components of a KBS and explain two (02) potential uses of relevant KBS components within ABCI. “Potential use” here refers to a business activity and not to a technology.

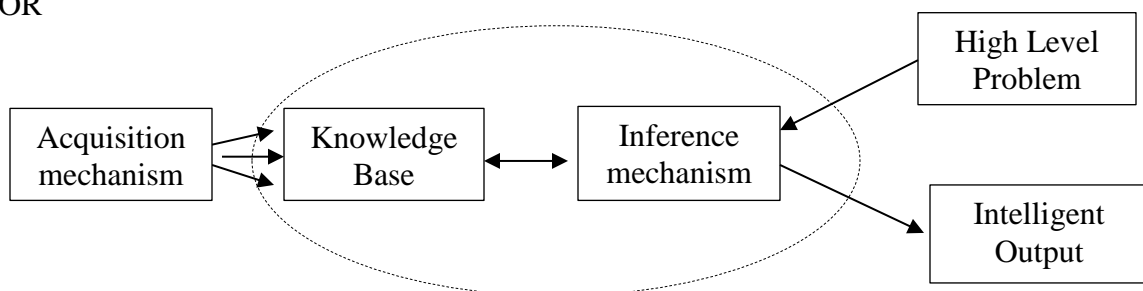
(8 marks)

Component of a KBS

- Knowledge acquisition
- Knowledge base
- Inference Mechanism
- Knowledge output (intelligent output)

Knowledge acquisition mechanism is the way the knowledge is acquired for the KBS. The acquisition and storage of knowledge forms a knowledge reservoir called “Knowledge Base”. Inference mechanism is the process of deriving conclusions logically from known facts and premises. (Generating new knowledge based on the existing knowledge)

OR



Knowledge – Based System

(12)

(Open ended part: student need to show a potential use within the organisation.. Only two potential uses are expected, with a brief description). Examples can be as follows (examiner can judge any other examples):

**Two Potential uses :**

- i. Knowledge acquisition: ABCI can use these mechanisms to gather knowledge from the students, staff, external examiners, external stake holders and organisations, etc. Can use surveys, questionnaires, and social networking, etc.
- ii. Knowledge base: ABCI can store knowledge acquired for future use and to enhance its decision making, and to help the students and staff when they need to solve problems. ABCI can allow access to the knowledge base for its staff and students, and make it a value added service.
- iii. Knowledge output: can use searching facilities and querying interfaces, call centers, etc. Can provide graphs, charts, tables, etc. in a web interface.

Note: No need to talk about inference engine as it does not directly refer to any business use and it is a technical matter of a KBS

- (c) Explain how the IT systems indicated in the description given prior to the question and your suggestions for other IT systems given in section (a) above can be used to provide the KBS components, instead of having a separate KBS.

(4 marks)

1. **Knowledge acquisition**: can use surveys, answers to assignments in LMS, forums and blogs already in LMS; or else (an alternative answer) the feedbacks/responses collection mechanisms provided in the CRM when dealing with stake holders, external parties and students; or else (another alternative answer), acquiring management and decision making knowledge, specifically in the financial matters, through daily functions carried out using finance and accounting systems.
2. **Knowledge base**: LMS, CRM, HRM, Finance and Accounting systems already have their databases, and these can be archived and used as knowledge bases. Or else, tools can be used to extract relevant data for constructing a knowledge base from these data base archives.
3. **Knowledge output**: all the systems (LMS, CRM, HRM, Finance & Accounting) systems have their report generation facilities, querying facilities, etc., and these can be used to output knowledge acquired.

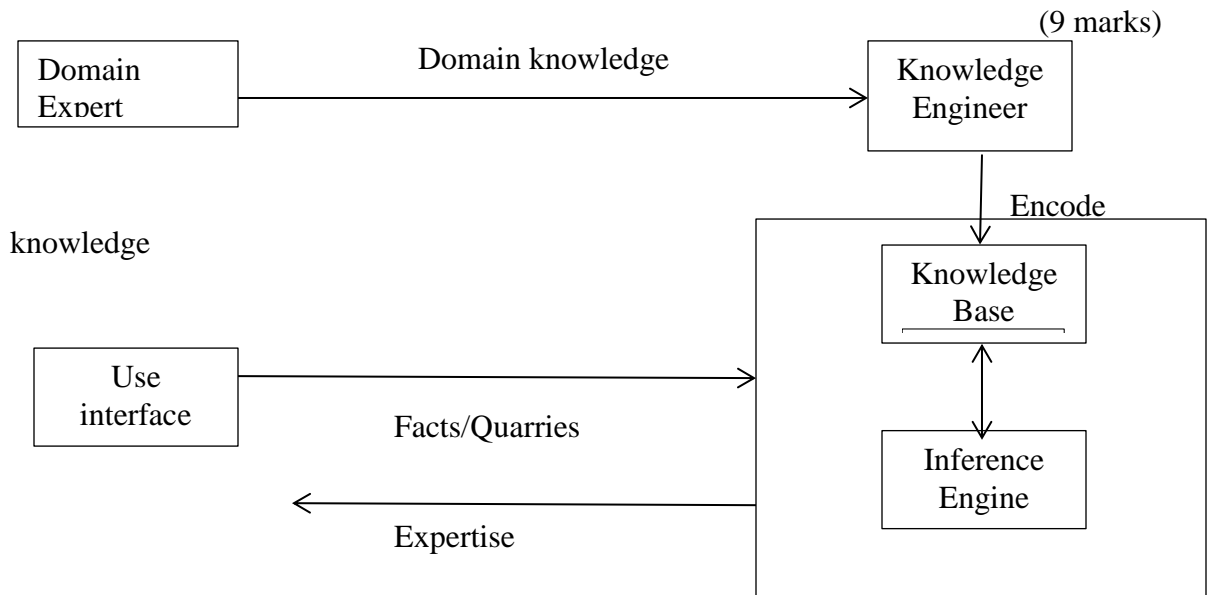
- (d) Describe the advantage that would be provided by a specialised KBS in comparison to your answer in (c) above.

(2 marks)

Given systems may not have inference mechanisms. A specialised KBS will have good inference mechanisms and AI techniques to provide comprehensive KBS functions and outputs. Such a system would be more adaptive and accurate as the knowledge base grows.

**Answer No. 05**

- (a) To facilitate the learning process of the remote candidate, explain how an expert system can be used by the ABCI. Use a schematic diagram of an expert system as an aid to your answer. (9 marks)



**Domain expert:** ABCI has its academic staff and expert, who will be entering domain knowledge, and answers to potential and already raised questions.

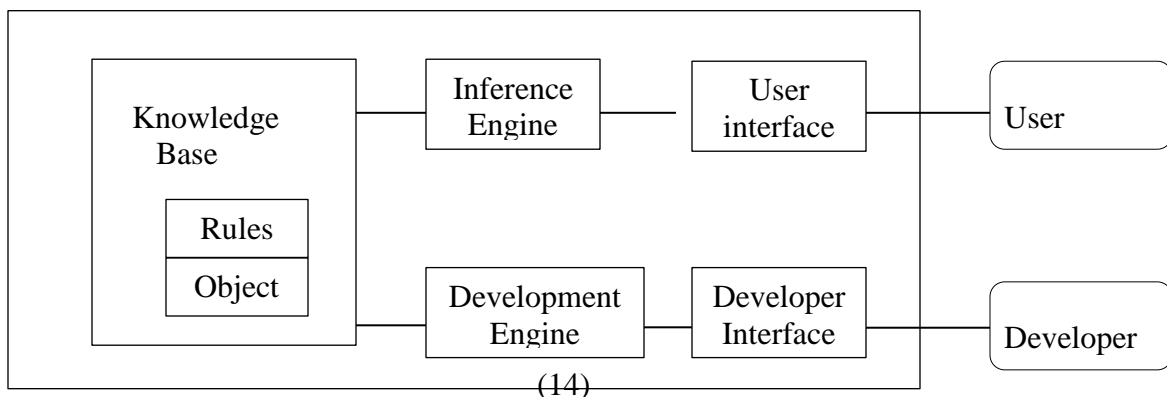
**Knowledge engineer:** will perform the encoding of the knowledge and make it representable to a knowledge base.

**Knowledge base:** will store and keep on accumulating knowledge, making the coded knowledge available to be used when a relevant query comes.

**Inference engine:** will accept the user queries and decide the best possible answer based on a set of rules and available knowledge in the knowledge base.

**User interface:** The focus here is the remote candidate, and hence the user interface should be clear and accessible from a remote user without much technical support. A web based interface with facilities to present the knowledge output from the KBS will be most suitable

**OR**  
**Expert Systems**



An expert system consists of several components. The above figure illustrates components of an expert from both user and developer perspectives.

- A knowledge base - contains facts and rules from past experience of experts
- An inference engine - the program that locates the appropriate knowledge in the knowledge base, and infers new knowledge by applying logical processing and problem-solving strategies.
- User interface - the means of communication between a user and the expert system's problem-solving processes.
- Developer interface - The means of communication between a developer and the expert system's problem-solving processes
- Development engine - Help developers build knowledge bases. Collecting knowledge needed to solve problems and build the knowledge base continues to be the biggest bottleneck in building expert systems.

(b) Is the statement of the CEO of ABCI a realistic statement? Briefly explain two (02) reasons to justify your answer.

(6 marks)

Open ended question, however, the answer should have a logic. Possible answer would be:

1. The above expert system and the use of IT systems will make it feasible for the remote candidates, including foreign candidates, to engage in most of the learning activities. Therefore, CEO's wish to "expand its services beyond country borders" is realistic.
2. To "make it the best of such institutes in the country" is a too ambitious statement. That can be the vision, but it will depend on many factors. There will be competition from other similar institutes, and the ABCI will have to outperform them. An extra effort and commitment with a strategic plan by the management is necessary for such an achievement. Just the IT systems would not do.

## Answer No. 06

- (a) What are knowledge discovery systems? Briefly explain. In your explanation, consider the knowledge management sub-processes of knowledge discovery systems. (5 marks)

Directly from the study pack. Refer study pack lesson 8 page 3

KDS support two KM sub-process:

1. combination : discovery of new explicit knowledge
2. socialisation : discovery of new tacit knowledge

- (b) List and explain five (05) of the six phases of knowledge discovery process. (10 marks)

Phases of Knowledge Discovery Process

1. Selecting the goals of the discovery process.

Discovery process needs at least some rough concepts of the goal so that it can guide the other phases.

2. Selection of Data

Data miner has to select a set of data objects that are to be used in discovery. Different techniques can be used to collect data from multiple sources.

3. Data Pre-Processing

Data has to be transformed into the form which is required by the data mining methods. Inconsistency of data should be removed. Data has to be normalized.

4. Applying the Data Mining Methods

Several data mining methods are available for the actual extraction of patterns. Most reliable method should be applied. Statistical method, neural nets, decision trees or rule discovery methods can be used.

5. Interpretation and evaluation of the results

The results may be visualized in the form of charts or graphics. A rule discovery tool may come out with a large net set of rules. Then the net should be provided with a pruning tool that enables the users to form on their interest.

3. Utilising of the results

Depending on the task, results can be utilized in different ways and for different purposes.

Phases of Academic Research Model and CRISP-DM model also considered as correct answers with correct explanation.



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