MOCK TEST PAPER - II

INTERMEDIATE (NEW): GROUP – II

PAPER – 7: ENTERPRISE INFORMATION SYSTEMS AND STRATEGIC MANAGEMENT

SECTION – A: ENTERPRISE INFORMATION SYSTEMS

ANSWERS

MULTIPLE CHOICE QUESTIONS

1. **(b)** Operational Risk

2. **(d)** Testable Business Rules

3. **(c)** Security Analyst

4. **(b)** Platform as a Service

5. **(c)** All users are required to have a unique user id.

6. **(b)** Preventive Control

7. **(d)** Counter Measure

8. **(c)** Infrastructure as a Service (IaaS)

9. **(a)** Cloud based Application

10. **(b)** Credit Line setup can be breached.

Descriptive Questions

1. **(a)** **Logical Access Violators** are the persons who exploit logical exposures in an organization. They are mainly as follows:

   ♦ Hackers: Hackers try their best to overcome restrictions to prove their ability. Ethical hackers most likely never try to misuse the computer intentionally but assists in finding the weaknesses in the system;

   ♦ Employees (authorized or unauthorized);

   ♦ IS Personnel: They have easiest to access to computerized information since they come across to information during discharging their duties. Segregation of duties and supervision help to reduce the logical access violations;

   ♦ Former Employees: should be cautious of former employees who have left the organization on unfavorable terms;

   ♦ End Users; Interested or Educated Outsiders; Competitors; Foreigners; Organized Criminals; Crackers; Part-time and Temporary Personnel; Vendors and consultants; and Accidental Ignorant – Violation done unknowingly.

   (b) **Automated Teller Machines (ATM) Channel Server:** This server contains the details of ATM account holders. Soon after the facility of using the ATM is created by the Bank, the details of such customers are loaded on to the ATM server. When the Central Database is busy with central end-of- day activities or for any other reason, the file containing the account balance of the customer is sent to the ATM switch. Such a file is called Positive Balance File (PBF). This ensures not only continuity of ATM operations but also ensures that the Central database is always up-to-date. The above process is applicable to stand alone ATMs at the Branch level. As most of the ATMs are attached to the central network, the only control is through ATM Switch.

2. **(a)** The key benefits of CRM module that the company may have availed are as follows:

- ♦ **Improved customer relations:** One of the prime benefits of using a CRM is obtaining better customer satisfaction. By using this strategy, all dealings involving servicing, marketing, and selling out products to the customers can be carried out in an organized and systematic way. Better services can be provided to customers through improved understanding of their issues and this in turn helps in increasing customer loyalty and decreasing customer agitation. In this way, continuous feedback from the customers regarding the products and services can be received. It is also possible that the customers may recommend the product to their acquaintances, when efficient and satisfactory services are provided.

- ♦ **Increase customer revenues:** By using a CRM strategy for any business, the revenue of the company can be increased. Using the data collected, marketing campaigns can be popularized in a more effective way. With the help of CRM software, it can be ensured that the product promotions reach a different and brand new set of customers, and not the ones who had already purchased the product, and thus effectively increase the customer revenue.

- ♦ **Maximize up-selling and cross-selling:** A CRM system allows up-selling which is the practice of giving customers premium products that fall in the same category of their purchase. The strategy also facilitates cross selling which is the practice of offering complementary products to customers, based on their previous purchases. This is done by interacting with the customers and getting an idea about their wants, needs, and patterns of purchase. The details thus obtained will be stored in a central database, which is accessible to all company executives. So, when an opportunity is spotted, the executives can promote their products to the customers, thus maximizing up-selling and cross selling.

- ♦ **Better internal communication:** Following a CRM strategy helps in building up better communication within the company. The sharing of customer data between different departments will enable them to work as a team. This is better than functioning as an isolated entity, as it will help in increasing the company's profitability and enabling better service to customers.

- ♦ **Optimize marketing:** CRM enables to understand the customer needs and behavior in a better way, thereby allowing any enterprise to identify the correct time to market its product to the customers. CRM will also give an idea about the most profitable customer groups, and by using this information, similar prospective groups, at the right time will be targeted. In this way, marketing resources can be optimized efficiently and time is not wasted on less profitable customer groups.

(b) The application areas where Grid Computing can be used effectively and efficiently are as follows:

- ♦ Civil engineers collaborate to design, execute, & analyze shake table experiments.

- ♦ An insurance company mines data from partner hospitals for fraud detection.

- ♦ An application service provider offloads excess load to a compute cycle provider.

- ♦ An enterprise configures internal & external resources to support e-Business workload.

- ♦ Large-scale science and engineering are done through the interaction of people, heterogeneous computing resources, information systems and instruments, all of which are geographically and organizationally dispersed.

3. **(a)** The activities that Mr. Anil would be performing while doing auditing of physical access controls are as follows:

(i) Sitting and Marking: Auditing building sitting and marking requires attention to several key factors and features, including:

- **Proximity to hazards:** The IS auditor should estimate the building's distance to natural and manmade hazards, such as Dams; Rivers, lakes, and canals; Natural gas and petroleum pipelines; Water mains and pipelines; Earthquake faults; Areas prone to landslides; Volcanoes; Severe weather such as hurricanes, cyclones, and tornadoes; Flood zones; Military bases; Airports; Railroads and Freeways. The IS auditor should determine if any risk assessment regarding hazards has been performed and if any compensating controls that were recommended have been carried out.

- **Marking:** The IS auditor should inspect the building and surrounding area to see if building(s) containing information processing equipment identify the organization. Marking may be visible on the building itself, but also on signs or parking stickers on vehicles.

(ii) Physical barriers: This includes fencing, walls, barbed/razor wire, bollards, and crash gates. The IS auditor needs to understand how these are used to control access to the facility and determine their effectiveness.

(iii) Surveillance: The IS auditor needs to understand how video and human surveillance are used to control and monitor access. He or she needs to understand how (and if) video is recorded and reviewed, and if it is effective in preventing or detecting incidents.

(iv) Guards and dogs: The IS auditor need to understand the use and effectiveness of security guards and guard dogs. Processes, policies, procedures, and records should be examined to understand required activities and how they are carried out.

(v) Key-Card systems: The IS auditor needs to understand how key-card systems are used to control access to the facility. Some points to consider include: Work zones: Whether the facility is divided into security zones and which persons are permitted to access which zones whether key-card systems record personnel movement; What processes and procedures are used to issue keycards to employees? etc.

(b) [Section 63] Punishment for false information or failure to give information, etc.

(1) Any person willfully and maliciously giving false information and so causing an arrest or a search to be made under this Act shall on conviction be liable for imprisonment for a term which may extend to two years or with fine which may extend to fifty thousand rupees or both.

(2) If any person -

(a) being legally bound to state the truth of any matter relating to an offence under section 3, refuses to answer any question put to him by an authority in the exercise of its powers under this Act; or

(b) refuses to sign any statement made by him in the course of any proceedings under this Act, which an authority may legally require to sign; or

(c) to whom a summon is issued under section 50 either to attend to give evidence or produce books of account or other documents at a certain place and time, omits to attend or produce books of account or documents at the place or time, he shall pay, by way of penalty, a sum which shall not be less than five hundred rupees but which may extend to ten thousand rupees for each such default or failure.

(3) No order under this section shall be passed by an authority referred to in sub-section (2) unless the person on whom the penalty is proposed to be imposed is given an opportunity of being heard in the matter by such authority.

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(4) Notwithstanding anything contained in clause (c) of sub-section (2), a person who intentionally disobeys any direction issued under section 50 shall also be liable to be proceeded against under section 174 of the Indian Penal Code (45 of 1860).

4. (a) General Controls that can be applied to all components of system are as follows:

- **Information Security Policy**: The security policy is approved by the senior management and encompasses all areas of operations of bank and drives access to information across the enterprise and other stakeholders.

- **Administration, Access, and Authentication:** IT should be administered with appropriate policies and procedures clearly defining the levels of access to information and authentication of users.

- **Separation of key IT functions:** Secure deployment of IT requires the bank to have separate IT organization structure with key demarcation of duties for different personnel within IT department and to ensure that there are no Segregation of Duties (SoD) conflicts.

- **Management of Systems Acquisition and Implementation:** Software solutions for CBS are most developed acquired and implemented. Hence, process of acquisition and implementation of systems should be properly controlled.

- **Change Management:** IT solutions deployed and its various components must be changed in tune with changing needs as per changes in technology environment, business processes, regulatory and compliance requirements. These changes impact the live environment of banking services. Hence, change management process should be implemented to ensure smooth transition to new environments covering all key changes including hardware, software and business processes. All changes must be properly approved by the management, before implementation.

- **Backup, Recovery and Business Continuity:** Heavy dependence on IT and criticality makes it imperative that resilience of banking operations should be ensured by having appropriate business continuity including backup, recovery and off-site data center.

- **Proper Development and Implementation of Application Software:** Application software drives the business processes of the banks. These solutions in case developed and implemented must be properly controlled by using standard software development process.

- **Confidentiality, Integrity and Availability of Software and data files:** Security is implemented to ensure Confidentiality, Integrity and Availability of information. Confidentiality refers to protection of critical information. Integrity refers to ensuring authenticity of information at all stages of processing. Availability refers to ensuring availability of information to users when required.

- **Incident response and management:** There may be various incidents created due to failure of IT. These incidents need to be appropriately responded and managed as per pre-defined policies and procedures.

- **Monitoring of Applications and supporting Servers:** The Servers and applications running on them are monitored to ensure that servers, network connections and application software along with the interfaces are working continuously.

- **Value Add areas of Service Level Agreements (SLA):** SLA with vendors is regularly reviewed to ensure that the services are delivered as per specified performance parameters.

- **User training and qualification of Operations personnel:** The personnel deployed have required competencies and skill-sets to operate and monitor the IT environment.

(b) The various criteria that information in Mr. Rajesh's report should meet so that it should be useful to his credit chief manager are as follows:

♦ **Relevant** - MIS reports need to be specific to the business area they address. This is important because a report that includes unnecessary information might be ignored.

♦ **Timely** - Managers need to know what's happening now or in the recent past to make decisions about the future. Be careful not to include information that is old. An example of timely information for your report might be customer phone calls and emails going back 12 months from the current date.

♦ **Accurate** - It's critical that numbers add up and that dates and times are correct. Managers and others who rely on MIS reports can't make sound decisions with information that is wrong. Financial information is often required to be accurate to the dollar. In other cases, it may be OK to round off numbers.

♦ **Structured** - Information in an MIS report can be complicated. Making that information easy to follow helps management understand what the report is saying. Try to break long passages of information into more readable blocks or chunks and give these chunks meaningful headings.

5. **(a)** The pertinent issues related to Cloud Computing are as follows:

♦ **Threshold Policy:** The main objective of implementing threshold policy is to inform cloud computing service consumers and providers what they should do. Quite often, this policy does not exist. The only legal document between the customer and service provider is the Service Level Agreement (SLA). This document contains all the agreements between the customer and the service provider; it contains what the service provider is doing and is willing to do. However, there is no standard format for the SLA, and as such, there may be services not documented in the SLA that the customer may be requiring in future. A carefully drafted threshold policy outlines what cloud computing service consumers and providers should do. It is important to consider how the cloud service provider will handle sudden increases or decreases in demand. How will unused resources be allocated?

♦ **Interoperability:** If a company enters into a contract with one cloud computing vendor, it may find it difficult to change to another computing vendor that has proprietary APIs (application programming interfaces) and different formats for importing and exporting data. Industry cloud computing standards do not exist for APIs or formats for importing/exporting data. This creates problems of achieving interoperability of applications between two cloud computing vendors. Once a company is locked in with one cloud provider, it is not easy to move an entire infrastructure to other clouds. Moreover, each cloud provider offers a unique set of services and tools for operating and controlling its cloud. Learning a new cloud environment is similar to learning a new technology.

♦ **Hidden Costs:** Such costs may include higher network charges for storage and database applications, or latency issues for users who may be located far from cloud service providers.

♦ **Unexpected Behaviour:** An application may perform well at the company's internal data centre. It does not necessarily imply that the application will perform the same way in the cloud. Therefore, it is essential to test its performance in the cloud for unexpected behavior. Testing may include checking how the application allocates resources on sudden increase in demand for resources and how it allocates unused resources. This problem must be solved before obtaining services from the cloud.

♦ **Security Issues:** Cloud computing infrastructures use new technologies and services, most which have not been fully evaluated with respect to security. The important security issues

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with cloud computing are: the management of the data might not be fully trustworthy; the risk of malicious insider attacks in the cloud; and the failing of cloud services. Maintaining confidentiality is one the major issues faced in cloud systems because information is stored at a remote location which can be accessed by the service provider. Data confidentiality can be preserved by encrypting data. Cloud systems share computational resources, storage, and services between multiple customer applications in order to achieve efficient utilization of resources while decreasing cost. However, this sharing of resources may violate the confidentiality users' IT Assets. It must be ensured that there a degree of isolation between these users. In most cases, the provider must ensure that their infrastructure is secure and that their consumers' data and applications are protected while the customer must ensure that the provider has taken the proper security measures to protect their information.

♦ **Legal Issues:** Cloud systems need to adhere to several regulatory requirements, privacy laws and data security laws. These laws vary from country to country and cloud users have no control over where their data is physically located.

♦ **Software Development in Cloud:** From the perspective of the application development, developers face the complexity of building secure applications that may be hosted in the cloud. The speed at which applications will change in the cloud will affect both the System Development Life Cycle (SDLC) and security. The project manager must keep in mind the applications should be upgraded frequently. For this, the project manager must ensure that their application development processes are flexible enough to keep up with the changes.

♦ **Bugs in Large-Scale Distributed Systems:** One of the difficult challenges in Cloud Computing is removing errors in these very large scale distributed systems.

(b) The different sub processes involved in the process Order to Cash Cycle are as follows:

(i) Sales and Marketing (SM)

♦ Advertises and markets the company's products and books sales orders from customers.

(ii) Order Fulfilment

♦ Receives orders from SM.

♦ Checks inventory to establish availability of the product. If the product is available in stock, transportation is arranged and the product is sent to the customer.

(iii) Manufacturing

♦ If the product is not available in stock, this information is sent to the manufacturing department so that the product is manufactured and subsequently sent to the customer.

(iv) Receivables

♦ The invoice is created, sent to the customer, payment received and the invoice closed.

♦ Under each sub process, there could be many activities. For example:

o **Main Process** - Order Fulfilment

o **Sub Process –**Receive Orders

o **Other Activities –**Check correctness and validity of information in order, enter order in computer system, check credit worthiness of customer, check credit limit, obtain approval for any discrepancy etc.

SECTION – B: STRATEGIC MANAGEMENT

SUGGESTED ANSWERS/HINTS

1. (A)

(1)	(2)	(3)	(4)	(5)
(b)	(c)	(d)	(c)	(b)

(B) (c)

(C) (c)

(D) (b)

(E) (a)

(F) (c)

(G) (b)

(H) (a)

2. The strategy used here was of developing a competitive advantage via product which helped Kamal Sweets Corner regain their lost business. This is also one of the major importance cum advantage of strategic management, that is helps to develop core competencies and competitive advantages to overcome competition.

This strategy was a Reactive strategy. Wherein, the owners saw their business fall to 50% of revenue and then seeking a strategic advisory. They did not plan proactively as to when the new shops were already opening. They reacted only when the business started to lose up.

Generally, it is always beneficial to develop strategies proactively, so that the dip in businesses is small and manageable, and even if they are huge, the management has ample time to fix it.

3. (a) The presence of strategic management cannot counter all hindrances and always achieve success as there are limitations attached to strategic management. These can be explained in the following lines:

♦ **Environment is highly complex and turbulent.** It is difficult to understand the complex environment and exactly pinpoint how it will shape-up in future. The organisational estimate about its future shape may awfully go wrong and jeopardise all strategic plans. The environment affects as the organisation has to deal with suppliers, customers, governments and other external factors.

♦ **Strategic Management is a time-consuming process.** Organisations spend a lot of time in preparing, communicating the strategies that may impede daily operations and negatively impact the routine business.

♦ **Strategic Management is a costly process.** Strategic management adds a lot of expenses to an organization. Expert strategic planners need to be engaged, efforts are made for analysis of external and internal environments devise strategies and properly implement. These can be really costly for organisations with limited resources particularly when small and medium organisations create strategies to compete.

In a competitive scenario, where all organisations are trying to move strategically, it is difficult to clearly estimate the competitive responses to the strategies.

(b) A strategic group consists of those rival firms which have similar competitive approaches and positions in the market. Companies in the same strategic group can resemble one another in any of the several ways – have comparable product-line breadth, same price/quality range, same distribution channels, same product attributes, identical technological approaches, offer similar services and technical assistance and so on.

The procedure for constructing a strategic group map and deciding which firms belong in which strategic group is as follows:

♦ Identify the competitive characteristics that differentiate firms in the industry typical variables are price/quality range (high, medium, low); geographic coverage (local, regional, national, global); degree of vertical integration (none, partial, full); product-line breadth (wide, narrow); use of distribution channels (one, some, all); and degree of service offered (no-frills, limited, full).

♦ Plot the firms on a two-variable map using pairs of these differentiating characteristics.

♦ Assign firms that fall in about the same strategy space to the same strategic group.

♦ Draw circles around each strategic group making the circles proportional to the size of the group's respective share of total industry sales revenues.

4. (a) A company's mission statement is typically focused on its present business scope — "who we are and what we do"; mission statements broadly describe an organizations present capabilities, customer focus activities and business makeup. An organisation's mission states what customers it serves, what need it satisfies, and what type of product it offers. It is an expression of the growth ambition of the organisation. It helps organisation to set its own special identity, business emphasis and path for development. Mission amplifies what brings the organisation to this business or why it is there, what existence it seeks and what purpose it seeks to achieve as a business organisation.

In other words, the mission serves as a justification for the firm's very presence and existence; it legitimizes the firm's presence.

(b) Following are the differences between Divestment and Liquidation strategy:

Divestment Strategy	Liquidation Strategy
Divestment strategy involves the sale or liquidation of a portion of business, or a major division, profit center or SBU.	It involves closing down a firm and selling its assets.
Divestment is usually a part of rehabilitation or restructuring plan and is adopted when a turnaround has been attempted but has proved to be unsuccessful. Option of a turnaround may even be ignored if it is obvious that divestment is the only answer.	Liquidation becomes only option in case of severe and critical conditions where either turnaround or divestment are not seen as solution or have been attempted but failed.
Efforts are made for the survival of organization.	Liquidation as a form of retrenchment strategy is considered as the most extreme and unattractive.
Survival of organization helps in retaining personnel, at least to some extent.	There is loss of employment with stigma of failure.

5. (a) The Best Cost Provider strategy would ensure a better reach to the not so affluent customers and provide them with good quality cycles and equipments, thus tapping in on the increasing trend of cycling.

Two sub-strategies that can be implemented are:

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1. Offering lower prices than rivals for the same quality of products

2. Charging same prices for better quality of products

The idea of Mr. Vijay is to provide almost same quality of products in terms of functionality if not so in terms of branding, to customer who do not have huge sums of money to pay. Thus, sub-strategy number one, offering lower prices for almost same quality should be implemented to become the best cost provider of cycles and related equipments in the market.

(b) Human resource management has been accepted as a strategic partner in the formulation of organization's strategies and in the implementation of such strategies through human resource planning, employment, training, appraisal and reward systems. The following points should be kept in mind as they can have a strong influence on employee competence:

i. **Recruitment and selection:** The workforce will be more competent if a firm can successfully identify, attract, and select highly competent applicants.

ii. **Training:** The workforce will be more competent if employees are well trained to perform their jobs properly.

iii. **Appraisal of performance:** The performance appraisal is to identify any performance deficiencies experienced by employees due to lack of competence. Such deficiencies, once identified, can often be solved through counselling, coaching or training.

iv. **Compensation:** A firm can usually increase the competency of its workforce by offering pay, benefits and rewards that are not only attractive than those of their competitors but also recognizes merit.

6. (a) Leading change has to start with diagnosing the situation and then deciding which of several ways to handle it. Managers have five leadership roles to play in pushing for good strategy execution:

(i) Staying on top of what is happening, closely monitoring progress, solving out issues, and learning what obstacles lie in the path of good execution.

(ii) Promoting a culture of esprit de corps that mobilizes and energizes organizational members to execute strategy in a competent fashion and perform at a high level.

(iii) Keeping the organization responsive to changing conditions, alert for new opportunities, bubbling with innovative ideas, and ahead of rivals in developing competitively valuable competencies and capabilities.

(iv) Exercising ethical leadership and insisting that the company conduct its affairs like a model corporate citizen.

(v) Pushing corrective actions to improve strategy execution and overall strategic performance.

(b) The various steps in Benchmarking Process are as under:

(i) **Identifying the need for benchmarking:** This step will define the objectives of the benchmarking exercise. It will also involve selecting the type of benchmarking. Organizations identify realistic opportunities for improvements.

(ii) **Clearly understanding existing decisions processes:** The step will involve compiling information and data on performance.

(iii) **Identify best processes:** Within the selected framework best processes are identified. These may be within the same organization or external to them.

(iv) **Comparison of own process and performance with that of others**: Benchmarking process also involves comparison of performance of the organization with performance of other organization. Any deviation between the two is analysed to make further improvements.

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(v) **Prepare a report and implement the steps necessary to close the performance gap:** A report on benchmarking initiatives containing recommendations is prepared. Such a report also contains the action plans for implementation.

(vi) **Evaluation:** Business organizations evaluate the results of the benchmarking process in terms of improvements vis-à-vis objectives and other criteria set for the purpose. It also periodically evaluates and reset the benchmarks in the light of changes in the conditions that impact the performance.