

PAPER – 7: ENTERPRISE INFORMATION SYSTEMS AND STRATEGIC MANAGEMENT

SECTION – A: ENTERPRISE INFORMATION SYSTEMS

QUESTIONS

MULTIPLE CHOICE QUESTIONS

Chek-N-Cure is a diagnostic center that provides various facilities such as blood tests, allergy tests, MRI, CT-Scans etc. and customized need- based packages to its clients on nominal charges. The center has total 15 laboratory setups spread all over in Nagpur and Pune. As a normal practice, the diagnostic samples of various clients formed a part of Chek-N-Cure's data server which the company used to share with Government aided organizations at regular intervals for research and innovation purposes keeping the anonymity of its clients.

In the recent past, the diagnostic center faced a cyber-data theft wherein vast quantities of sensitive personal information and medical details of some clients were compromised and made available in the public domain. Due to negligence of center's Chief Information Officer Mr. Rajesh, the hackers could plan an asynchronous attack whereby they could successfully violate the integrity of certain components of diagnostic center's subsystems and got unauthorized access to various client's crucial sensitive data stored on the diagnostics center's data server. The Government regulators took a serious note of such a gross negligence and issued a show cause notice to Chek-N-Cure diagnostic center.

The management of Chek-N-Cure diagnostic center took an immediate remedial step to reduce its reputational and financial loss and hired an IT consultant Mr. Anil from the industry to advise them on way ahead. After detailed investigation and analysis, Mr. Anil suggested the Chek-N-Cure diagnostic center to firstly implement the Intrusion Prevention System for the protection of its sensitive data and install the ERP system in its working environment with adequate controls in place to manage the access privileges given to user aligned with job requirement and responsibility. He further suggested to upgrade the existing network of diagnostic center with cloud for ease and expansion so as to allow its clients access their reports from various devices such as tablets, mobile phones etc. The due remittance of Mr. Anil's consultancy services was credited to his bank account by Chek-N-Cure diagnostic center through National Electronic Funds Transfer (NEFT) of Core Banking System (CBS).

Based on the above case scenario, answer the Question No(s) 1 to 5.

1. The Chek-N-Cure diagnostic center has been negligent in implementing and maintaining reasonable security practices and procedures to handle the sensitive personal data of information of its clients on its data server. Under which provision of IT Act 2000; will the diagnostic center have to pay to its clients for the damage caused to them?
 - (a) Section 43
 - (b) Section 66E

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(c) Section 43A

(d) Section 66C

2. The risks that are associated with the proposed implementation of ERP systems in Chek-N-Cure diagnostic center are given below:

(I) Insufficient funding

(II) Program Management

(III) Lifelong implementation

(IV) Application Portfolio Management

(V) Top Management Support

The various aspects to which these risks can be associated are mentioned below:

(A) Post implementation

(B) Process

(C) Technological

(D) Implementation

(E) People

Choose the correct option that highlights the risks with their associated aspects.

(a) (I) – (A), (II)- (B), (III)-(C), (IV) – (D), (V) – (E)

(b) (IV) – (B), (II)- (A), (II)-(D), (IV) – (E), (V) – (C)

(c) (I) – (D), (II)- (C), (III)-(E), (IV) – (A), (V) – (B)

(d) (I) – (D), (II)- (B), (III)-(A), (IV) – (C), (V) – (E)

3. Various risks that may persist in the working environment of the Chek-N-Cure diagnostic centre are controlled using following measures.

(I) Fire Alarms

(II) Identification Badges

(III) Privilege Management

(IV) Firewall

(V) Password Management System

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The controls under which the aforementioned measures are categorized as under:

- (A) Network Access Control
- (B) User Access Management
- (C) Physical Controls
- (D) Environmental Controls
- (E) Operating System Access Control

Choose the correct option that pairs the measure/factors with its associated controls.

- (a) (I) – (A), (II)- (B), (III)-(C), (IV) – (D), (V) – (E)
 - (b) (IV) – (B), (II)- (A), (II)-(D), (IV) – (E), (V) – (C)
 - (c) (I) – (D), (II)- (C), (III)-(B), (IV) – (A), (V) – (E)
 - (d) (I) – (D), (II)- (B), (III)-(A), (IV) – (C), (V) – (E)
4. In purview of the suggestions made by Mr. Anil, which of the following characteristics of Cloud Computing is reflected in case the reports are accessed by clients from different devices?
- (a) Network Access Capabilities
 - (b) Multi Tenancy
 - (c) Resiliency
 - (d) Scalability
5. Some statements regarding National Electronic Funds Transfer (NEFT) of Core Banking System (CBS) are mentioned below:
- (I) This facility of Core Banking System facilitates one-to-one funds transfer.
 - (II) The individuals can transfer the funds electronically from one bank's branch to any individual having an account with any other branch of the same bank.
 - (III) Individuals can transfer the funds electronically from one bank's branch to any individual having an account with any other bank branch.
 - (IV) A maximum amount of Rs. 2 lakhs can be transferred through this facility.
- Which of the following statement(s) are not true?
- (a) (I), (II)
 - (b) (II), (IV)
 - (c) (I), (III)
 - (d) (III), (IV)

DESCRIPTIVE QUESTIONS

Chapter 1: Automated Business Processes

6. No entity operates in risk-free environment and therefore any management needs to implement framework to operate more effectively and efficiently in such an environment filled with risks. Discuss the ERM framework that an enterprise may adapt for the successful management of various risks prevailing in their working environment.
7. What do you think shall be the generic reasons due to which an enterprise may decide to implement BPA in its working environment?

Chapter 2: Financial and Accounting Systems

8. XYZ Ltd. has well implemented ERP systems, in which its Sales and Distribution Module has high level of integration complexity starting from enquiry to order and the ending with delivery. Discuss in detail the sub-processes involved in the Module.
9. The Data Analytics applications involve many steps so that appropriate results can be produced which are useful for the management in decisions making. Discuss the processes involved in the Data Analytics Process.

Chapter 3: Information Systems and its Components

10. Computers are used extensively to process data and provide information for decision-making. However, uncontrolled use of computers can have a widespread impact on a society. Because computers play a large part in assisting us to process data and make decisions, it is significant that their use is in controlled manner. Discuss various factors that influence an organization towards control and audit of its computer-based information systems.
11. Discuss the concept of Segregation of Duties (SoD) with example.

Chapter 4: E-Commerce, M-Commerce and Emerging Technologies

12. Though the e-commerce industry has grown exponentially, every e-commerce business has unique rules and regulations to follow, and cybersecurity is a top priority to ensure all data stored online is protected and vulnerable to online security breaches and cyber-attacks. As an e-commerce business owner, you have unique challenges compared to brick-and-mortar shop owners. Discuss various risks associated in an e-business environment.
13. The digital payment system is growing exponentially with evolving payment methods, rising e-commerce use, enhanced broadband connectivity, and emergence of new technologies. Discuss various advantages and drawbacks of Digital Payments.

Chapter 5: Core Banking Systems

14. In Core Banking System, what do you think shall be the key features of the full-fledged security policy that needs to be developed and implemented to ensure Confidentiality, Integrity and Availability of data and information.
15. Discuss the process of authorization of any Credit Card used by any customer.

SUGGESTED ANSWERS

1. (c) Section 43A
2. (d) (I) – (D), (II)- (B), (III)-(A), (IV) – (C), (V) – (E)
3. (c) (I) – (D), (II)- (C), (III)-(B), (IV) – (A), (V) – (E)
4. (a) Network Access Capabilities
5. (b) (II), (IV)
6. The ERM framework consists of eight interrelated components that are derived from the way management runs a business and are integrated with the management process as discussed below. These components are as follows:
 - (i) **Internal Environment:** The internal environment encompasses the tone of an organization and sets the basis for how risk is viewed and addressed by an entity's people, including risk management philosophy and risk appetite, integrity and ethical values, and the environment in which they operate. Management sets a philosophy regarding risk and establishes a risk appetite. The internal environment sets the foundation for how risk and control are viewed and addressed by an entity's people. The core of any business is its people, their individual attributes including integrity, ethical values and competence and the environment in which they operate. They are the engine that drives the entity and the foundation on which everything rests.
 - (ii) **Objective Setting:** Objectives should be set before management can identify events potentially affecting their achievement. ERM ensures that management has a process in place to set objectives and that the chosen objectives support and align with the entity's mission/vision and are consistent with the entity's risk appetite.
 - (iii) **Event Identification:** Potential events that might have an impact on the entity should be identified. Event identification includes identifying factors – internal and external – that influence how potential events may affect strategy implementation and achievement of objectives. It includes distinguishing between potential events that represent risks, those representing opportunities and those that may be both.

Opportunities are channeled back to management's strategy or objective-setting processes. Management identifies inter-relationships between potential events and may categorize events to create and reinforce a common risk language across the entity and form a basis for considering events from a portfolio perspective.

- (iv) **Risk Assessment:** Identified risks are analysed to form a basis for determining how they should be managed. Risks are assessed on both an inherent and a residual basis, and the assessment considers both risk likelihood and impact. A range of possible results may be associated with a potential event, and management needs to consider them together.
 - (v) **Risk Response:** Management selects an approach or set of actions to align assessed risks with the entity's risk tolerance and risk appetite, in the context of the strategy and objectives. Personnel identify and evaluate possible responses to risks, including avoiding, accepting, reducing and sharing risk.
 - (vi) **Control Activities:** Policies and procedures are established and executed to help ensure that the risk responses that management selected are effectively carried out.
 - (vii) **Information and Communication:** Relevant information is identified, captured and communicated in a form and time frame that enables people to carry out their responsibilities. Information is needed at all levels of an entity for identifying, assessing and responding to risk. Effective communication also should occur in a broader sense, flowing down, across and up the entity. Personnel need to receive clear communications regarding their role and responsibilities.
 - (viii) **Monitoring:** The entire ERM process should be monitored, and modifications made as necessary. In this way, the system can react dynamically, changing as conditions warrant. Monitoring is accomplished through ongoing management activities, separate evaluations of the ERM processes or a combination of both.
7. A list of generic reasons for which an enterprise shall go for BPA may include any or combination of the following:
- Errors in manual processes leading to higher costs.
 - Payment processes not streamlined, due to duplicate or late payments, missing early pay discounts, and losing revenue.
 - Paying for goods and services not received.
 - Poor debtor management leading to high invoice aging and poor cash flow.
 - Not being able to find documents quickly during an audit or lawsuit or not being able to find all documents.

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- Lengthy or incomplete information of new employee or new account on-boarding.
 - Unable to recruit and train new employees, but where employees are urgently required.
 - Lack of management understanding of business processes.
 - Poor customer service.
8. The Sales and Distribution Module of ERP systems of XYZ Ltd. has following sub-processes:
- ◆ **Pre-Sales Activities:** Include prospecting of customers, identifying prospective customers, gathering data, contacting them and fixing appointments, showing demo, discussion, submission of quotations, etc.
 - ◆ **Sales Order:** Sales order is recorded in our books after getting a confirmed purchased order from our customer. Sales order shall contain details just like purchase order. For example- Stock Item Details, Quantity, Rate, Due Date of Delivery, Place of Delivery, etc.
 - ◆ **Inventory Sourcing:** It includes making arrangements before delivery of goods; ensuring goods are ready and available for delivery.
 - ◆ **Material Delivery:** Material is delivered to the customer as per sales order. All inventory details are copied from Sales Order to Material Delivery for saving user's time and efforts. This transaction shall have a linking with Sales Order. Stock balance shall be reduced on recording of this transaction.
 - ◆ **Billing:** This is a transaction of raising an invoice against the delivery of material to customer. This transaction shall have a linking with Material Delivery and all the details shall be copied from it. Stock balance shall not affect again.
 - ◆ **Receipt from Customer/Payment:** This is a transaction of receiving amount from customer against sales invoice and shall have a linking with sales invoice.
9. Data Analytics applications involve more than just analysing data. Particularly on advanced analytics projects, much of the required work takes place upfront, in collecting, integrating and preparing data and then developing, testing and revising analytical models to ensure that they produce accurate results. Data analytics process includes the following steps:
- Data Collection:** The analytics process starts with data collection, in which data scientists identify the information they need for an analytics application and then work on their own or with data engineers and IT staffers to assemble it for use. Data from different source systems may need to be combined via data integration routines transformed into a common

format and loaded into an analytics system, such as a Hadoop cluster, NoSQL database or data warehouse.

Find and Fix Data Quality Problem: Once the data that's needed is in place, the next step is to find and fix data quality problems that could affect the accuracy of analytics applications. That includes running data profiling and data cleansing jobs to make sure that the information in a data set is consistent and that errors and duplicate entries are eliminated. Additional data preparation work is then done to manipulate and organize the data for the planned analytics use, and data governance policies are applied to ensure that the data hews to corporate standards and is being used properly.

At that point, the data analytics work begins in earnest. A data scientist builds an analytical model, using predictive modelling tools or other analytics software and programming languages such as Python, Scala, R and SQL. The model is initially run against a partial data set to test its accuracy; typically, it's then revised and tested again, a process known as "training" the model that continues until it functions as intended. Finally, the model is run in production mode against the full data set, something that can be done once to address a specific information need or on an ongoing basis as the data is updated.

Building Analytical Model: In some cases, analytics applications can be set to automatically trigger business actions. For example, stock trades by a financial services firm. Otherwise, the last step in the data analytics process is communicating the results generated by analytical models to business executives and other end users to aid in their decision-making. That usually is done with the help of data visualization techniques, which analytics teams use to create charts and other info graphics designed to make their findings easier to understand. Data visualizations often are incorporated into Business Intelligence dashboard applications that display data on a single screen and can be updated in real time as new information becomes available.

10. Various factors that influence an organization towards control and audit of its computer-based information systems are as follows:
 - **Organizational Costs of Data Loss:** Data is a critical resource of an organization for its present and future processes. If the data is accurate, its ability to adapt and survive in a changing environment increases significantly. If such data is lost, an organization can incur substantial losses.
 - **Cost of Incorrect Decision Making:** Making high-quality decisions are dependent on both – the quality of the data and quality of the decision rules that exist within computer-based information systems. While making strategic decisions, some errors may be allowed by management considering the long-run nature of strategic planning decisions whereas highly accurate data would be required while making operational

control decisions by the managers. These operational controls taken by managers involve detection, investigations and correction of the processes. Incorrect data can also have adverse impact on the other stakeholders having an interest in the organization.

- **Costs of Computer Abuse:** Computer abuse is defined as any incident associated with computer technology in which the user suffered or could have suffered loss and a perpetrator by intention made or could have made gain. Unauthorized access to computer systems, malwares, unauthorized physical access to computer facilities, unauthorized copies of sensitive data, viruses, and hacking can lead to destruction of assets (hardware, software, data, information etc.).
 - **Value of Computer Hardware, Software and Personnel:** These are critical resources of an organization, which has a credible impact on its infrastructure and business competitiveness. The intentional or unintentional loss of hardware, the destructions or corruption of software, and non-availability of skilled computer professionals in some countries; an organization might be unable to continue their operations seamlessly.
 - **High Costs of Computer Error:** In a computerized enterprise environment where many critical business processes are performed, a data error during entry or process would cause great damage. For example - small data error during an operational flight can lead to loss of human lives; an error in any financial system can make an organization liable for penalty etc.
 - **Maintenance of Privacy:** Today, data collected in a business process contains private information about an individual too. These data were also collected before computers but now, there are many instances in which privacy of individuals has been eroded beyond acceptable levels.
 - **Controlled evolution of computers' Use:** Use of Technology and reliability of complex computer systems cannot be guaranteed and the consequences of using unreliable systems can be destructive. Governments, professional bodies, pressure groups, organizations and individual persons all must be concerned with evaluating and monitoring how we deploy computer technology.
11. The concept of Segregation of Duties (SoD), also known as Separation of Duties, ensures that single individuals do not possess excess privileges that could result in unauthorized activities such as fraud or the manipulation or exposure of sensitive data. The concept of segregation of duties has been long-established in organization accounting departments where, for instance, separate individuals or groups are responsible for the creation of vendors, the request for payments, and the printing of checks. Since accounting personnel

frequently handle checks and currency, the principles, and practices of segregation of duties controls in accounting departments are the norm. For example-the person approving the purchase orders should not be allowed to make payment and pass entries in the books at the same time.

Preventive and detective controls should be put into place to manage segregation of duties matters. In most organizations, both the preventive and detective controls will be manual, particularly when it comes to unwanted combinations of access between different applications. However, in some transaction-related situations, controls can be automated although they may still require intervention by others.

Some Examples of Segregation of Duties Controls

- ◆ **Transaction Authorization:** Information systems can be programmed or configured to require two (or more) persons to approve certain transactions. For Example - in retail establishments where a manager is required to approve a large transaction or a refund.
- ◆ **Split custody of high-value assets:** Assets of high importance or value can be protected using various means of split custody. For example, a password to an encryption key that protects a highly valued asset or sensitive data can be split in two halves, one half assigned to two persons, and the other half assigned to two persons, so that no single individual knows the entire password.
- ◆ **Workflow:** Applications that are workflow-enabled can use a second (or third) level of approval before certain high-value or high-sensitivity activities can take place. For example, a workflow application that is used to provision user accounts can include extra management approval steps in requests for administrative privileges.
- ◆ **Periodic reviews:** IT or internal audit personnel can periodically review user access rights to identify whether any segregation of duties issues exist. Care should also be taken to ensure that the access privileges are reviewed and updated with the changing job roles.

12. Various risks that are associated with any e-business environment are as follows:

- (i) **Privacy and Security:** When an organization uses internet to engage in e-commerce, it exposes itself to additional security threats and privacy issues. There are often issues of security and privacy due to lack of personalized digital access and knowledge. The nature of e-commerce operations is an important factor determining the security risks perceptions of any e-commerce installation. For example, if the type of industry is banking and finance, it would require more stringent deployment of security solutions than would be for manufacturing industry.

- (ii) **Quality issues:** There are quality issues raised by customers as the original product differs from the one that was ordered.
- (iii) **Delay in goods and Hidden Costs:** When goods are ordered from another country, the shipment may be delayed due to factors such as port congestion, bad weather, custom clearances, etc. Moreover, e-commerce companies may have these hidden costs.
- (iv) **Needs access to internet and lack of personal touch:** The e-commerce requires an internet connection which is an extra expense and lacks personal touch.
- (v) **Security and Credit card issues:** The credit card and debit card information may be stolen and misused which poses a security threat. There is also possibility of cloning of credit cards and debit cards.
- (vi) **Infrastructure:** There is a greater need of not only digital infrastructure but also network expansion of roads and railways which remains a substantial challenge in developing countries.
- (vii) **Problem of anonymity:** There is a need to identify and authenticate users in the virtual global market where anyone can sell to or buy from anyone, anything from anywhere.
- (viii) **Repudiation of contract:** There is possibility that the electronic transaction in the form of contract, sale order or purchase by the trading partner or customer may be denied.
- (ix) **Lack of authenticity of transactions:** The electronic documents that are produced during an e-commerce transaction may not be authentic and reliable.
- (x) **Data Loss or theft or duplication:** The data transmitted over the Internet may be lost, duplicated, tampered with, or replayed.
- (xi) **Attack from hackers:** Web servers used for e-commerce may be vulnerable to hackers. A hacker is an unauthorized user who attempts to or gains access to the system with/without the intention to steal or modify data or to insert viruses or worms to cause damage to the system.
- (xii) **Denial of Service:** Service to customers may be denied due to non-availability of system as it may be affected by viruses, e-mail bombs and by transmitting so many data packets to a server that it cannot process them all. The denial of service may cause a network to shut down, making it impossible for users to access the site. For busy e-commerce sites such as Flipkart, these attacks are costly; while the site is shut down, customers cannot make purchases. Moreover, the longer a site is shut down, the more damage is done to a site's reputation.

- (xiii) **Non-recognition of electronic transactions:** e-Commerce transactions, as electronic records and digital signatures may not be recognized as evidence in courts of law in some countries.
- (xiv) **Lack of audit trails:** Audit trails in e-Commerce system may be lacking and the logs may be incomplete, too voluminous, or easily tampered with.
- (xv) **Problem of piracy:** Intellectual property such as copyright may not be adequately protected when such property is transacted through e-Commerce.

13. Some advantages of Digital Payments are as follows:

- (i) **Easy and convenient:** Digital payments are easy and convenient. E-payment eliminates the security risks associated with handling cash.
- (ii) **Pay or send money from anywhere:** With digital payment modes, one can pay from anywhere anytime.
- (iii) **Discounts from taxes:** Government has announced many discounts to encourage digital payments. Users get 0.75% discounts on fuels and 10% discount on insurance premiums of government insurers.
- (iv) **Written record:** User often forgets to note down his/her spending, or even if nothing is done it takes a lot of time. These are automatically recorded in passbook or inside E-Wallet app. This helps to maintain record, track spending and budget planning.
- (v) **Less Risk:** Digital payments have less risk if used wisely. If user loses mobile phone or debit/credit card or Aadhar card, he/she need not to worry a lot. No one can use anyone else's money without MPIN, PIN or fingerprint in the case of Aadhar. It is advised that user should get card blocked, if lost.
- (vi) **Competitive advantage to business:** Digital payment enables businesses to make sales to customers who choose to pay electronically and gain a competitive advantage over those who accept payment only through traditional methods.
- (vii) **Environment Friendly:** Digital payment eliminates the use of paper.

Few disadvantages of Digital Payments are listed below:

- (i) **Difficult for a non-technical person:** As most of the digital payment modes are based on mobile phone, the internet and cards; these modes are somewhat difficult for non-technical persons such as farmers, workers etc.
- (ii) **Risk of data theft:** There is a big risk of data theft associated with the digital payment. Hackers can hack the servers of the bank or the e-Wallet a customer is using and

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easily get his/her personal information and can use this information to steal money from the customer's account.

- (iii) **Overspending:** One keeps limited cash in his/her physical wallet and hence thinks twice before buying anything. But if digital payment modes are used, one has access to all his/her money that can result in overspending.
 - (iv) **Disputed transactions:** In case the electronic money such as credit card is misused by someone else, it is very difficult to receive a refund.
 - (v) **Increased business costs:** Digital payment systems come with an increased need to protect sensitive financial information stored in a business's computer systems from unauthorized access. Businesses have to incur additional costs in procuring, installing and maintaining sophisticated payment-security technologies.
 - (vi) **The necessity of internet access:** Digital payment cannot be performed if Internet connection fails.
14. In CBS, the full-fledged Security policy that needs to be developed and implemented to ensure Confidentiality, Integrity, and Availability (CIA) of data and information shall have following key features:
- Implementation of bank specific email domains (example, XYZ bank with mail domain xyz.in) with anti-phishing (security measures to prevent steal of user data) and anti-malware software (software tool/program to identify and prevent malicious software/malware from infecting network) with controls enforced at the email solution.
 - Two factor authentication, an extra step added to the log-in process, such as a code sent to user's phone or a fingerprint scan, that helps verify the user's identity and prevent cybercriminals from accessing private information.
 - Implementation of Password Management policy to provide guidance on creating and using passwords in ways that maximize security of the password and minimize misuse or theft of the password.
 - Effective training of employees to educate them to strictly avoid clicking any links received via email.
 - Proper reporting mechanism to save the banks from the effects of misconduct – including legal liability, lasting reputational harm, and serious financial losses.
 - Required to conduct effective due diligence and oversight to thoroughly assess the credentials of vendors/third party service providers/partners and making non-disclosure and security policy compliance agreements mandated for them.

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- Effective change management process to record/ monitor all the changes that are moved/ pushed into production environment.
 - Robust configuration management processes to register changes to business applications, supporting technology, service components and facilities.
 - Incident response and management mechanism to take appropriate action in case of any cyber security incident with well written incident response procedures elaborating the roles of staff handling such incidents.
 - Capturing of the audit logs pertaining to user actions and an alert mechanism to monitor any change in the log settings.
 - Continuous surveillance to stay regularly updated on the latest nature of emerging cyber threats.
- 15.** The process of authorization of Credit Card Facility is as under:
- (i) Customer will swipe the credit card for the purchase made by him/her on the Point of Sale (PoS) machine at merchant's shop/establishment.
 - (ii) PoS will process the transaction only once the same is authenticated.
 - (iii) The PoS will send the authentication request to the merchant's bank which will then send the transaction authentication verification details to the credit card network such as VISA. from which the data will be validated by the credit card issuing bank within a fraction of seconds.
 - (iv) Once the transaction is validated, the approval message is received from credit card issuing bank to the credit card network which then flows to the merchant's bank and approves the transaction in the PoS machine.
 - (v) The receipt of the transaction is generated, and the sale is completed. The transaction made is charged during the billing cycle of that month.

SECTION – B: STRATEGIC MANAGEMENT

Multiple Choice Questions

1. Anand, a fashion designer from Mumbai, started a nail art parlour in a posh Mumbai urban area, in partnership with his college friend Aanya. They had a clear choice of business as per their field of study and were assured that cosmetics is one of the biggest industries in India.

Cosmetics include a huge range of products, from skin care to hair care, makeup (the most profitable), lip care, hygiene products and many more lines of personal care. However, Aanya being a trained nano art designer and Anand driven by Nail Art, happened to share common interests, and hence, built Naileo.

The business plan was simple, collaborate with online service providers, be active on social media, offer paid promotions, and give out free trials to lure in customers. The focus being on creating a connection. Clearly, the target group was young working females who could spend decent amounts of money on personal luxury. The brand wanted to cash on easy disposal income of the target consumers. However, in the same segment for men, tattoo parlours were already taking away the share of business. These tattoo brands could easily transition into Nail Art and be a tough competition to Naileo. The team had to be aware of the competitor dynamics.

Anand had personal connections in Solan district of Himachal Pradesh, where they planned to open small workshops to produce artificial nails of high quality to be sold pan-India, online as well as to other parlours. The team of two also wanted to add value to the society. For that they offered free training to young girls and offered them permanent employment. The customers found the initiative quite enriching and supported them by being loyal to their services. This was an unplanned aspect of brand building that added more value than paid promotions.

The brand has been doing well lately, with the economic model being sustainable so far. They plan to open two more stores in Mumbai and a flagship store in Bengaluru. With a set vision of the future and a socially impactful mission, Naileo has been a profitable bet for Anand and Aanya.

Based on the above Case Scenario, answer the Multiple Choice Questions.

- (i) Tattoo Parlours are an indirect competition to Naileo. Application of which of the following can be utilised to understand the in-depth intricacies of their competitive strength?
 - (a) Competitive Landscape
 - (b) Identification Tools
 - (c) Competitive Intelligence

- (d) Collation of all gathered information
 - (ii) Anand's decision of opening Solan Workshop can be described as?
 - (a) Horizontal Integration Diversification
 - (b) Vertical Integration Diversification
 - (c) Concentric Diversification
 - (d) Strategic Alliance
 - (iii) The main idea behind marketing is to connect with the customers. In this context, which of the following has been willingly ignored by the marketing team at Naileo?
 - (a) Market Segmentation
 - (b) Market Scanning
 - (c) Market Positioning
 - (d) Marketing Target
 - (iv) Based on question three above, what was the core methodology behind willingly ignoring a major aspect of marketing?
 - (a) SWOT Analysis, founders' area of expertise
 - (b) BCG Matrix, Artificial Nails being a cash cow
 - (c) Vision, to employ underprivileged youth
 - (d) Mission, to be a national leader in new cosmetic segment
 - (v) Anand being the strategy implementer of Naileo, should be aware of which of the following statements around corporate culture?
 - (a) Corporate Culture prevails strategic decisions
 - (b) Change all the hindering facets of corporate culture for effective strategy execution
 - (c) Implementation is a superset of corporate culture
 - (d) Leadership Style is a subset of culture
2. Sanjay guided the team of young entrepreneurs to hold to the current position in the market till they get a big opportunity. What could be their business termed as basis Sanjay's advice?
- (a) Question Mark
 - (b) Cash Cow
 - (c) Star
 - (d) Dog

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3. Sumedha has a home-grown brand which makes traditional lehengas. She thought of expanding her business and added linen jackets and cotton trousers to her product line. Which strategy is she working on?
 - (a) Backward integration
 - (b) Intensification
 - (c) Diversification
 - (d) Horizontal Diversification
4. Raju started a samosa stall in a local market and the existing momos and bhelpuri stall owners started creating problems for him. This is an example of-
 - (a) Bargaining power of suppliers
 - (b) Threat of new entrants
 - (c) Substitute products
 - (d) Nature of rivalry in industry
5. The activity of identifying the strongest and weakest companies is known as:
 - (a) Strategic Audit
 - (b) Portfolio Analysis
 - (c) Strategic Surveillance
 - (d) Strategic Group mapping
6. An airline operator is providing special lounge at major airports for its frequent flyers. This marketing technique is known as :-
 - (a) Relationship Marketing
 - (b) Augmented Marketing
 - (c) Social Marketing
 - (d) Synchro Marketing

Descriptive Questions

Chapter 1-Introduction to Strategic Management

7. "A business organization cannot always plan all their strategies in advance and often need to blend planned strategies with reactive strategies." Do you agree with the statement? Give reasons.
8. What benefits accrue by following a strategic approach to managing?

Chapter 2-Dynamics of Competitive Strategy

9. Sky chemical industry intends to grow its business. Advise the company on the available options using Ansoff's product market growth matrix.
10. Write a brief note on 'Driving Forces' that affect an industry.

Chapter 3-Strategic Management Process

11. Mission statement of a company focuses on the question: 'who we are' and 'what we do'. Explain briefly.
12. Mr. Batra is working in Apex Corporation, a leading manufacturer of electronic products, is considering whether to enter the fitness trackers and smartwatches technology market. The market is growing rapidly, but the competition is fierce. Mr. Batra and his team has to decide whether to invest in research and development for fitness trackers and smartwatches technology or to focus on their core products. The decision could have significant implications for the company's future growth and profitability.

Where will you place Mr. Batra in organisational hierarchy? What are the dimensions of the decisions being taken by him?

Chapter 4-Corporate Level Strategies

13. Redefinition of business is involved in both "Expansion" and "Retrenchment" strategy, however, method involved in their execution is completely different. Explain.
14. ABC Inc. a successful company in the healthcare industry, was facing a decline due to outdated technology and lack of innovation. The company was losing market share and struggling to retain customers. In an effort to reverse the trend, the management decided to implement a strategy. They hired new talent, invested in research and development, and streamlined their operations to increase efficiency. Through these efforts, ABC Inc. was able to introduce new products and services, reposition themselves in the market, and eventually regain their competitive edge. The company's revenue and profits increased, and they were once again on the path to success.

Discuss the strategy which has been implemented by the management of ABC Inc.

Chapter 5-Business Level Strategies

15. Domolo is a premium cycle and cycling equipments brand which targets high spending customer with a liking for quality and brand name. Their cycles range from rupees fifteen thousand to rupees one lac. The recent trend of fitness through cycling has created humongous demand for cycles and peripherals like helmets, lights, braking systems, fitness applications, etc. The customer base has grown 150% in the last three months. Mr. Vijay, who is an investor wants to tap in this industry and bring about cheaper options to

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people who cannot spend so much. Which business level strategy would best suit for Mr. Vijay's idea and what are the major sub-strategies that can be implemented to capture maximum market?

16. What are the common barriers that are faced by new entrants when an existing firm earns higher profits?

Chapter 6-Functional Level Strategies

17. What are the objectives that must be kept in mind while designing a pricing strategy of a new product?
18. How would you argue that Research and Development Personnel are important for effective strategy implementation?

Chapter 7-Organisation and Strategic Leadership

19. Anshuman was a CEO at a struggling company. Despite the challenges, he believed in the potential of his team and was determined to turn the company around. He started by communicating his vision to his employees. He encouraged them to think outside the box, take risks and be creative. He also invested in training programs to help employees develop new skills. He regularly recognized and rewarded employees for their hard work, which increased their job satisfaction and commitment. As a result, the company began to see positive changes.

Identify and discuss the leadership style adopted by Anshuman?

20. You are appointed as a manager of a company where you find that the company's culture is out of sync with what is needed for strategic success. Discuss steps you would initiate to tackle the problem.

Chapter 8-Strategy Implementation and Control

21. India's luxurious domestic airline Indijet in an attempt to retain its leadership in aviation sector has hired J S Dutta as its Chief Executive. Mr Dutta wishes to reorient company to make it a domestic discount carrier. He desires to introduce no frills business model by offering extremely low fares and improve margins by cutting down traditional amenities such as reclining seats and complimentary meals. At the same time setting the stage for a new air revolution, he wishes to brand itself as on-time airlines having proper systems in place and removing additional and wasteful activities and processes.

What steps will you advise to Mr Dutta?

22. What is Strategy Audit? Explain briefly the criteria for strategy audit given by Richard Rumelt's.

SUGGESTED ANSWERS

1. (i) (c) (ii) (b) (iii) (d) (iv) (a) (v) (b)
2. (a)
3. (b)
4. (b)
5. (d)
6. (a)

7. Yes, a business organization cannot always plan all their strategies in advance and often need to blend planned strategies with reactive strategies.

In planned strategy, organisations will analyse possible environmental scenarios and create strategic framework after proper planning and set procedures and work on these strategies in a pre-determined manner. However, in reality no company can forecast both internal and external environment exactly. Everything cannot be planned in advance. It is not possible to anticipate moves of rival firms, consumer behaviour, evolving technologies and so on.

There can be significant deviations between what was visualised and what actually happens. There can be significant or major strategic changes when the environment demands. Reactive strategy is triggered by the changes in the environment and provides ways and means to cope with the negative factors or take advantage of emerging opportunities.

8. The following are the benefits of strategic approach to managing:
 - ◆ Strategic management helps organisations to be more proactive instead of reactive in shaping its future. Organisations are able to analyse and take actions instead of being mere spectators. Thereby they are able to control their own destiny in a better manner. It helps them in working within vagaries of environment and shaping it, instead of getting carried away by its turbulence or uncertainties.
 - ◆ Strategic management provides framework for all the major decisions of an enterprise such as decisions on businesses, products, markets, manufacturing facilities, investments and organisational structure. It provides better guidance to entire organisation on the crucial point - what it is trying to do.
 - ◆ Strategic management is concerned with ensuring a good future for the firm. It seeks to prepare the corporation to face the future and act as pathfinder to various business opportunities. Organisations are able to identify the available opportunities and identify ways and means as how to reach them.

- ◆ Strategic management serves as a corporate defence mechanism against mistakes and pitfalls. It help organisations to avoid costly mistakes in product market choices or investments. Over a period of time strategic management helps organisation to evolve certain core competencies and competitive advantages that assist in its fight for survival and growth.
- 9. The Ansoff's product market growth matrix (proposed by Igor Ansoff) is a useful tool that helps businesses decide their product and market growth strategy. With the use of this matrix, a business can get a fair idea about how its growth depends upon its markets in new or existing products in both new and existing markets.

The Ansoff's product market growth matrix is as follows:

	Existing Products	New Products
Existing Markets	Market Penetration	Product Development
New Markets	Market Development	Diversification

Ansoff's Product Market Growth Matrix

Sky chemical industry can adopt market penetration, product development, market development or diversification simultaneously for its different products.

Market penetration refers to a growth strategy where the business focuses on selling existing products into existing markets. It is achieved by making more sales to present customers without changing products in any major way.

Market development refers to a growth strategy where the business seeks to sell its existing products into new markets. It is a strategy for company growth by identifying and developing new markets for the existing products of the company.

Product development refers to a growth strategy where business aims to introduce new products into existing markets. It is a strategy for company growth by offering modified or new products to current markets.

Diversification refers to a growth strategy where a business markets new products in new markets. It is a strategy by starting up or acquiring businesses outside the company's current products and markets.

As market conditions change overtime, a company may shift product-market growth strategies. For example, when its present market is fully saturated a company may have no choice other than to pursue new market.

10. The most dominant forces are called driving forces because they have the biggest influence on what kinds of changes will take place in the industry's structure and competitive environment. The most common driving forces are as follows:

- The internet and the new e-commerce opportunities and threats it breeds in the industry.
- Increasing globalization
- Changes in the long-term industry growth rate
- Product innovation
- Marketing innovations
- Entry or exit of major firms
- Diffusion of technical know-how across more companies and more countries
- Changes in cost and efficiency.

11. 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 organization's present capabilities, customer focus activities and business makeup. An organization'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 organization. It helps organization to set its own special identity, business emphasis and path for development. Mission amplifies what brings the organization to this business or why it is there, what existence it seeks and what purpose it seeks to achieve as a business organization.

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

12. As the decisions taken by Mr. Batra have organisation wide impact, involves large commitments and have implication on the future, he is at the top level in organisational hierarchy. These characteristics also indicate that he is taking strategic decisions in the organisation. The major dimensions of strategic decisions are as follows:

- ◆ **Strategic decisions require top-management involvement:** Strategic decisions involve thinking in totality of the organisation. Hence, problems calling for strategic decisions require to be considered by the top management.
- ◆ **Strategic decisions involve commitment of organisational resources:** Strategic decisions to launch a new project by a firm requires allocation of huge funds and assignment of a large number of employees.

- ◆ **Strategic decisions necessitate consideration of factors in the firm's external environment:** Strategic focus in organisation involves orienting its internal environment to the changes of external environment.
 - ◆ **Strategic decisions are likely to have a significant impact on the long-term prosperity of the firm:** Generally, the results of strategic implementation are seen on a long-term basis and not immediately.
 - ◆ **Strategic decisions are future oriented:** Strategic thinking involves predicting the future environmental conditions and how to orient for the changed conditions.
 - ◆ **Strategic decisions usually have major multifunctional or multi-business consequences:** As they involve organisation in totality, they affect different sections of the organisation with varying degree.
13. Expansion strategy is implemented by redefining the business by adding the scope of business substantially increasing the efforts of the current business. On the other hand, Retrenchment strategy involves redefinition of business by divesting a major product line or market.

Expansion is a promising and popular strategy that tends to be equated with dynamism, vigour, promise and success. Retrenchment or retreat becomes necessary or expedient for coping with particularly hostile and adverse situations in the environment and when any other strategy is likely to be suicidal.

Expansion may take the enterprise along relatively unknown and risky paths, full of promises and pitfalls. Retrenchment involves regrouping and recouping of the resources.

14. The management of ABC Inc. implemented turnaround strategy which is a highly-targeted effort to return ABC Inc. to profitability and increase positive cash flows to a sufficient level. Organizations those have faced a significant crisis that has negatively affected operations require turnaround strategy. Once turnaround is successful the organization may turn to focus on growth.

Conditions for turnaround strategies

When firms are losing their grips over market, profits due to several internal and external factors, and if they have to survive under the competitive environment they have to identify danger signals as early as possible and undertake rectification steps immediately. These conditions may be, inter alia cash flow problems, lower profit margins, high employee turnover and decline in market share, capacity underutilization, low morale of employees, recessionary conditions, mismanagement, raw material supply problems and so on.

Action plan for turnaround strategy

- Stage One – Assessment of current problems
- Stage Two – Analyze the situation and develop a strategic plan
- Stage Three – Implementing an emergency action plan

- Stage Four – Restructuring the business
 - Stage Five – Returning to normal
15. 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:

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.

16. A firm's profitability tends to be higher when other firms are blocked from entering the industry. New entrants can reduce industry profitability because they add new production capacity leading to increase supply of the product even at a lower price and can substantially erode existing firm's market share. Barriers to entry represent economic forces (or 'hurdles') that slow down or impede entry by other firms. Common barriers to entry include:
- (i) **Capital requirements:** When a large amount of capital is required to enter an industry, firms lacking funds are effectively barred from the industry, thus enhancing the profitability of existing firms in the industry.
 - (ii) **Economies of scale:** Many industries are characterized by economic activities driven by economies of scale. Economies of scale refer to the decline in the per-unit cost of production (or other activity) as volume grows. A large firm that enjoys economies of scale can produce high volumes of goods at successively lower costs. This tends to discourage new entrants.
 - (iii) **Product differentiation:** Production differentiation refers to the physical or perceptual differences, or enhancements, that make a product special or unique in the eyes of customers. Firms in the personal care products and cosmetics industries actively engage in product differentiation to enhance their products' features. Differentiation works to reinforce entry barriers because the cost of creating genuine product differences may be too high for the new entrants.
 - (iv) **Switching costs:** To succeed in an industry, new entrant must be able to persuade existing customers of other companies to switch to its products. To make a switch, buyers may need to test a new firm's product, negotiate new purchase contracts, and train personnel to use the equipment, or modify facilities for product use. Buyers often

incur substantial financial (and psychological) costs in switching between firms. When such switching costs are high, buyers are often reluctant to change.

- (v) **Brand identity:** The brand identity of products or services offered by existing firms can serve as another entry barrier. Brand identity is particularly important for infrequently purchased products that carry a high unit cost to the buyer. New entrants often encounter significant difficulties in building up the brand identity, because to do so they must commit substantial resources over a long period.
 - (vi) **Access to distribution channels:** The unavailability of distribution channels for new entrants poses another significant entry barrier. Despite the growing power of the internet, many firms may continue to rely on their control of physical distribution channels to sustain a barrier to entry to rivals. Often, existing firms have significant influence over the distribution channels and can retard or impede their use by new firms.
 - (vii) **Possibility of aggressive retaliation:** Sometimes the mere threat of aggressive retaliation by incumbents can deter entry by other firms into an existing industry. For example, introduction of products by a new firm may lead existing firms to reduce their product prices and increase their advertising budgets.
17. For a new product pricing strategies for entering a market needs to be designed. In pricing a really new product at least three objectives must be kept in mind.
- i. Making the product acceptable to the customers.
 - ii. Producing a reasonable margin over cost.
 - iii. Achieving a market that helps in developing market share.

For a new product an organization may either choose to skim or penetrate the market. In skimming prices are set at a very high level. The product is directed to those buyers who are relatively price insensitive but sensitive to the novelty of the new product. For example call rates of mobile telephony were set very high initially. Even the incoming calls were charged. Since the initial off take of the product is low, high price, in a way, helps in rationing of supply in favour of those who can afford it.

In penetration pricing firm keeps a temptingly low price for a new product which itself is selling point. A very large number of the potential customers may be able to afford and willing to try the product.

18. Research and Development (R&D) personnel can play an integral part in strategy implementation. These individuals are generally charged with developing new products and improving old products in a way that will allow effective strategy implementation. R&D employees and managers perform tasks that include transferring complex technology, adjusting processes to local raw materials, adapting processes to local markets, and altering products to particular tastes and specifications.

Strategies such as product development, market penetration, and concentric diversification require that new products be successfully developed and that old products be significantly

improved. But the level of management support for R&D is often constrained by resource availability.

19. Being a CEO of a struggling company, Anshuman has adopted Transformational leadership style. The style uses charisma and enthusiasm to inspire people to exert them for the good of the organization. Transformational leaders offer excitement, vision, intellectual stimulation and personal satisfaction. They inspire involvement in a mission, giving followers a 'dream' or 'vision' of a higher calling so as to elicit more dramatic changes in organizational performance. Such a leadership motivates followers to do more than originally affected to do by stretching their abilities and increasing their self-confidence, and also promote innovation throughout the organization.

Anshuman believed in the potential of his team. He started by communicating his vision to his employees. He encouraged them to think outside the box, take risks and be creative. He also invested in training programs to help employees develop new skills. He regularly recognized and rewarded employees for their hard work, which increased their job satisfaction and commitment.

20. Changing problem cultures is very difficult because of deeply held values and habits. It takes concerted management action over a period of time to replace an unhealthy culture with a healthy culture or to root out certain unwanted cultural obstacles and instil ones that are more strategy-supportive.

- ◆ The first step is to diagnose which facets of the present culture are strategy supportive and which are not.
- ◆ Then, managers have to talk openly and forthrightly to all concerned about those aspects of the culture that have to be changed.
- ◆ The talk has to be followed swiftly by visible, aggressive actions to modify the culture-actions that everyone will understand are intended to establish a new culture more in tune with the strategy.

The menu of culture-changing actions includes revising policies and procedures, altering incentive compensation, recruiting and hiring new managers and employees, replacing key executives, communication on need and benefit to employees and so on.

21. Mr Dutta should adopt business process reengineering (BPR). It is an approach to unusual improvement in operating effectiveness through the redesigning of critical business processes and supporting business systems. It is revolutionary redesign of key business processes that involves examination of the basic process itself. BPR refers to the analysis and redesign of workflows and processes both within the organization and between the organization and the external entities like suppliers, distributors, and service providers.

The orientation of redesigning efforts involves total deconstruction and rethinking of business process BPR involves the following steps:

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- i. **Determining objectives:** Objectives are the desired end results of the redesign process. They will provide the required focus, direction, and motivation for the redesign process and help in building a comprehensive foundation for the reengineering process.
 - ii. **Identify customers and determine their needs:** The process designers have to understand customers. The purpose is to redesign business process that clearly provides value addition to the customer.
 - iii. **Study the existing processes:** The study of existing processes will provide an important base for the process designers. The purpose is to gain an understanding of the 'what', and 'why' of the targeted process.
 - iv. **Formulate a redesign process plan:** Formulation of redesign plan is the real crux of the reengineering efforts. Customer focussed redesign concepts are identified and formulated. In this step alternative processes are considered and the best is selected.
 - v. **Implement the redesigned process:** It is easier to formulate new process than to implement them. Implementation of the redesigned process and application of other knowledge gained from the previous steps is key to achieve dramatic improvements.
22. A strategy audit is an examination and evaluation of areas affected by the operation of a strategic management process within an organization.

Richard Rumelt's Criteria for Strategy Audit

- (i) **Consistency:** A strategy should not present inconsistent goals and policies which can lead to organizational problems and conflicts. Inconsistencies in strategy are indicated if
 - (a) the cause of organizational problems is issue based;
 - (b) success for one department implies failure for another;
 - (c) the top management is expected to resolve policy problems and issues every time.
- (ii) **Consonance:** Consonance refers to the need for strategists to examine *sets of trends*, as well as individual trends, in auditing strategies. The difficulty is that most trends are the result of interactions among other trends. A strategy must represent an adaptive response to the external environment and to the critical changes occurring within it.
- (iii) **Feasibility:** A strategy must neither overtax available resources nor create unsolvable sub-problems. The final broad test of strategy is its feasibility; that is, can the strategy be attempted within the physical, human, and financial resources of the enterprise?
- (iv) **Advantage:** A strategy must provide for the creation and/or maintenance of a competitive advantage in a selected area of activity. The advantage may reflect superiority in any one or combination of: **resources, skills and position**.