(GI-1, GI-2+4, GI-3, GI-5+6 & VDI-1, VI-1, SI-1)
DATE: 24.08.2020   **MAXIMUM MARKS: 100**   **TIMING: 3¼ Hours**

EIS & SM

SECTION – A : ENTERPRISE INFORMATION SYSTEMS AND MANAGEMENT
Q. No. 1 & 2 is Compulsory,
Answer any three questions from the remaining four questions

Answer 1:

1. Ans. c
2. Ans. c
3. Ans. b
4. Ans. b
5. Ans. b
6. Ans. b
7. Ans. d
8. Ans. b   **{1 M Each Point x 15 = 15 Marks}**
9. Ans. b
10. Ans. a
11. Ans. c
12. Ans. c
13. Ans. b
14. Ans. a
15. Ans. b

Answer 2:

(a)   Internal Controls in Banks

Risks are mitigated by implementing internal controls as appropriate to the business environment. These types of controls must be integrated in the IT solution implemented at the bank's branches. Some examples of internal controls in bank branch are given here:

- Work of one staff member is invariably supervised/ checked by another staff member, irrespective of the nature of work (Maker-Checker process).
- A system of job rotation among staff exists.
- Financial and administrative powers of each official/ position is fixed and communicated to all persons concerned.
- Branch managers must send periodic confirmation to their controlling authority on compliance of the laid down systems and procedures.
- All books are to be balanced periodically. Balancing is to be confirmed by anauthorized official.
- Details of lost security forms are immediately advised to controlling so that they can exercise caution.
- Fraud prone items like currency, valuables, draft forms, term deposit receipts, traveler's cheques and other such security forms are in the custody of at least two officials of the branch.

(1/2 Mark for any 5 Point)

(b)   IT Controls in Banks

IT risks need to be mitigated by implementing the right type and level of controls in the automated environment. This is done by integrating controls into IT. Sample list of IT related controls are:

- The system maintains a record of all log-ins and log-outs.
  If the transaction is sought to be posted to a dormant (or inoperative) account, the processing is halted and can be proceeded with only with a supervisory password.
- The system checks whether the amount to be withdrawn is within the drawing power.
- The system flashes a message if the balance in a lien account would fall below the lien amount after the processing of the transaction.
- Access to the system is available only between stipulated hours and specified days only.
- Individual users can access only specified directories and files. Users should be given access only on a "need-to-know basis" based on their role in the bank. This is applicable for internal users of the bank and customers.
- Exception situations such as limit excess, reactivating dormant accounts, etc. can be handled only with a valid supervisory level password.
- A user timeout is prescribed. This means that after a user logs-in and there is no activity for a pre-determined time, the user is automatically logged- out of the system.
- Once the end-of-the-day process is over, the ledgers cannot be opened without a supervisory level password.

(1/2 M for any 5 Point)

Answer 3:

(a)   An **Operating System (OS)** is a set of computer programs that manages computer hardware resources and acts as an interface with computer applications programs. The operating system is a vital component of the system software in a computer system. Application programs usually require an operating system to function that provides a convenient environment to users for executing their programs. Computer hardware with operating system can thus be viewed as an extended machine, which is more powerful and easy to use. Some prominent Operating systems used nowadays are Windows 7, Windows 8, Linux, UNIX, etc.

All computing devices run an operating system. For personal computers, the most popular operating systems are Microsoft's Windows, Apple's OS X, and different versions of Linux. Smart phones and tablets run operating systems as well, such as Apple's iOS, Google Android, Microsoft's Windows Phone OS, and Research in Motion's Blackberry OS.

{1 M}

A variety of activities are executed by Operating systems which include:

- **Performing hardware functions:** Application programs to perform tasks must obtain input from keyboards, retrieve data from disk & display output on monitors. Achieving all this is facilitated by operating system. Operating system acts as an intermediary between the application program and the hardware.
- **User Interfaces:** An important function of any operating system is to provide user interface. If we remember DOS days, it had a command based User Interface (UI) i.e. text commands were given to computer to execute any command. But today we are more used to Graphic User Interface (GUI) which uses icons & menus like in the case of Windows. So, how we interface with our system will be provided by Operating system.
- **Hardware Independence:** Every computer could have different specifications and configurations of hardware. If application developer would

(1 M for any 5 point)

have to rewrite code for every configuration s/he would be in a big trouble. Fortunately, we have operating system, which provides Application Program Interfaces (API), which can be used by application developers to create application software, thus obviating the need to understand the inner workings of OS and hardware. Thus, OS gives us hardware independence.

♦ **Memory Management:** Memory Management features of Operating System allow controlling how memory is accessed and maximize available memory & storage. Operating systems also provides Virtual Memory by carving an area of hard disk to supplement the functional memory capacity of RAM. In this way, it augments memory by creating a virtual RAM.

♦ **Task Management:** Task Management feature of Operating system helps in allocating resources to make optimum utilization of resources. This facilitates a user to work with more than one application at a time i.e. multitasking and allows more than one user to use the system i.e. time sharing.

♦ **Networking Capability:** Operating systems can provide systems with features & capabilities to help connect computer networks. Like Linux & Windows 8 give us an excellent capability to connect to internet.

♦ **Logical Access Security:** Operation systems provide logical security by establishing a procedure for identification & authentication using a User ID and Password. It can log the user access thereby providing security control.

♦ **File management:** The operating system keeps a track of where each file is stored and who can access it, based on which it provides the file retrieval.

Answer:

(b) From the perspective of e-commerce in India, the IT Act, 2000 and its provisions contain many positive aspects which are asfollows:

♦ The implications for the e-businesses is that email is now a valid and legal form of communication in India that can be duly produced and approved inacour to flaw.

♦ Companies shall now be able to carry out electronic commerce using the legal infrastructure provided by the Act.

♦ Digital Signatures have been given legal validity and sanction in the Act.

♦ The Act throws open the doors for the entry of corporate companies in the business of being Certifying Authorities for issuing Digital Signatures Certificates.

♦ The Act allows Government to issue notification on the web thus heralding e-governance.

♦ The Act enables the companies to file any form, application or any other document with any office, authority, body or agency owned or controlled by the appropriate Government in electronic form by means of such electronic form as may be prescribed by the appropriate Government.

♦ The IT Act also addresses the important issues of security, which are so critical to the success of electronic transactions.

♦ The Act has given a legal definition to the concept of secure digital signatures that would be required to have been passed through a system of a security procedure, as stipulated by the Government at a later date.

(1/2 M Each for 8 point)

Under the IT Act, 2000, it shall now be possible for corporates to have a statutory remedy in case if anyone breaks into their computer systems or network and causes damages or copies data. The remedy provided by the Act is in the form of monetary damages, not exceeding Rs.1 crore.

Answer 4:
(a)   **Master Data:** As defined above, master data is relatively permanent data that is not expected to change again and again. It may change, but not again and again. In accounting systems, there may be following type of master data as shown in the Fig.
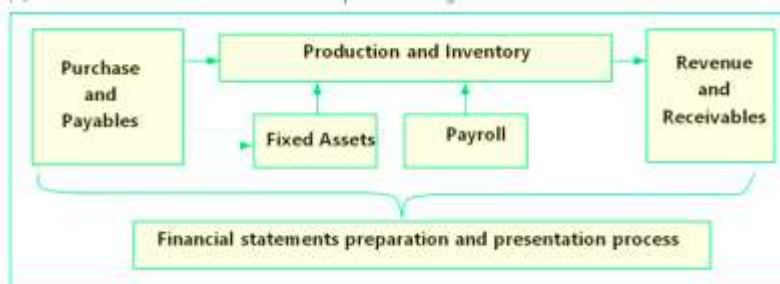
{2 M}

Types of Master Data in Financial and Accounting Systems

(a)   **Accounting Master Data –** This includes names of ledgers, groups, cost centers, accounting voucher types, etc. E.g. Capital Ledger is created once and not expected to change frequently. Similarly, all other ledgers like, sales, purchase, expenses and income ledgers are created once and not expected to change again and again. Opening balance carried forward from previous year to next year is also a part of master data and not expected to change.

(b)   **Inventory Master Data –** This includes stock items, stock groups, godowns, inventory voucher types, etc. Stock item is something which bought and sold for business **purpose**, a trading goods. E.g. If a person is into the business of dealing in white goods, stock items shall be Television, Fridge, Air Conditioner, etc. For a person running a medicine shop, all types of medicines shall be stock items for him/her.

(c)   **Payroll Master Data –** Payroll is another area connecting with Accounting **Systems**. Payroll is a system for calculation of salary and recoding of transactions relating to employees. Master data in case of payroll can be names of employees, group of employees, salary structure, pay heads, etc. These data are not expected to change frequently. E.g. Employee created in the system will remain as it is for a longer period of time, his/her salary structure may change but not frequently, pay heads associated with his/ her salary structure will be relatively permanent.

(d)   **Statutory Master Data –** This is a master data relating to statute/law. It may be different for different type of taxes. E.g. Goods and Service Tax (GST), Nature of Payments for Tax Deducted at Source (TDS), etc. This data also shall be relatively permanent. We don't have any control on this data as statutory changes are made by Government and not by us. In case of change in tax rates, forms, categories, we need to update/change our master data.

(1 M each 4 point)

Answer:
(b)   Various types of Asynchronous Attacks on data are as follows:

- **Data Leakage:** This involves leaking information out of the computer by means of dumping files to paper or stealing computer reports and tape.
- **Subversive Attacks:** These can provide intruders with important information about messages being transmitted and the intruder may attempt to violate the integrity of some components in the subsystem.
- **Wire-tapping:** This involves spying on information being transmitted over telecommunication network.

(1 M each 4 point)

- **Piggybacking:** This is the act of following an authorized person through a secured door or electronically attaching to an authorized telecommunication link that intercepts and alters transmissions. This involves intercepting communication between the operating system and the user and modifying them or substituting new messages.

Answer 5:

(a) As an Information Systems (IS) Auditor, various Audit Tools that can be used to perform IS Auditing are as follows:

(i)   **Snapshots:** Tracing a transaction is a computerized system can be performed with the help of snapshots or extended records. The snapshot software is built into the system at those points where material processing occurs which takes images of the flow of any transaction as it moves through the application. These images can be utilized to assess the authenticity, accuracy, and completeness of the processing carried out on the transaction. The main areas to dwell upon while involving such a system are to locate the snapshot points based on materiality of transactions when the snapshot will be captured and the reporting system design and implementation to present data in a meaningful way.   **{2 M}**

(ii) **Integrated Test Facility (ITF):** The ITF technique involves the creation of a dummy entity in the application system files and the processing of audit test data against the entity as a means of verifying processing authenticity, accuracy, and completeness. This test data would be included with the normal production data used as input to the application system. In such cases, the auditor must decide what would be the method to be used to enter test data and the methodology for removal of the effects of the ITF transactions.   **{1 M}**

(iii) **System Control Audit Review File (SCARF):** The SCARF technique involves embedding audit software modules within a host application system to provide continuous monitoring of the system's transactions. The information collected is written onto a special audit file- the SCARF master files. Auditors then examine the information contained on this file to see if some aspect of the application system needs follow-up. In many ways, the SCARF technique is like the snapshot technique along with other data collection capabilities.   **{1 M}**

(iv) **Continuous and Intermittent Simulation (CIS):** This is a variation of the SCARF continuous audit technique. This technique can be used to trap exceptions whenever the application system uses a database management system. The advantage of CIS is that it does not require modifications to the application system and yet provides an online auditing capability.   **{1 M}**

(v)   **Audit Hooks:** There are audit routines that flag suspicious transactions. For example, internal auditors at Insurance Company determined that their policyholder system was vulnerable to fraud every time a policyholder changed his or her name or address and then subsequently withdrew funds from the policy. They devised a system of audit hooks to tag records with a name or address change. The internal audit department will investigate these tagged records for detecting fraud. When audit hooks are employed, auditors can be informed of questionable transactions as soon as they occur. This approach of real-time notification displays a message on the auditor's terminal.   **{1 M}**
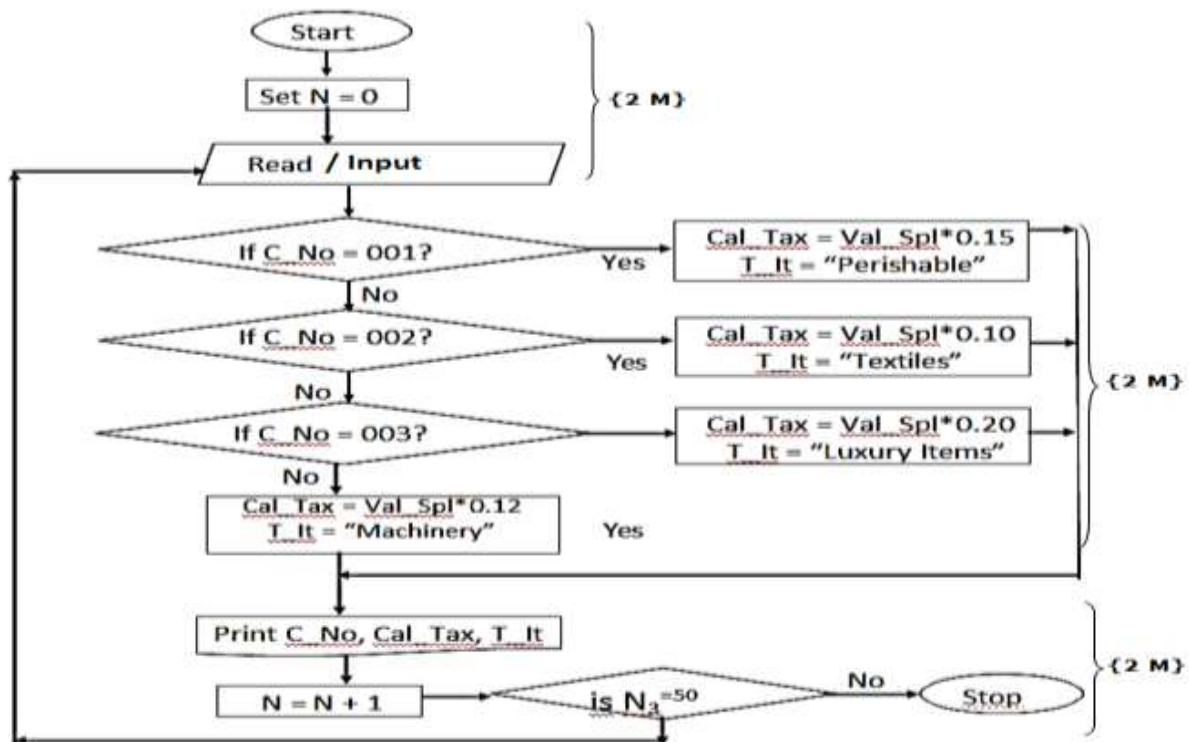
Answer:
(b) **(i)** **Snapshots:** Tracing a transaction is a computerized system can be performed with the help of snapshots or extended records. The snapshot software is built into the system at those points where material processing occurs which takes images of the flow of any transaction as it moves through the application. These images can be utilized to assess the authenticity, accuracy, and completeness of the processing carried out on the transaction. The main areas to dwell upon while involving such a system are to locate the snapshot points based on materiality of transactions when the snapshot will be captured and the reporting system design and implementation to present data in a meaningful way. **{2 M}**

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Answer 6:
(a) The variables are defined as follows:
C = Code No;   Val_Spl = Value of Supply;
T_It = Types of Item   N = Counter; Cal_Tax = Calculated Tax after GST

The required flowchart is as below:

Answer:

(b) The key technology components of Core Banking System (CBS) are asfollows:

- Database Environment
- Application Environment
- Web Environment
- Security solution
- Connectivity to the Corporate Network and the Internet
- Data Centre and Disaster Recovery Centre
- Network Solution architecture to provide total connectivity
- Enterprise Security architecture
- Branch and Delivery channel environment
- Online Transaction monitoring for fraud risk management

(1/2 M for any 8 point)

SECTION – B : STRATEGIC MANAGEMENT
Q. No. 7 & 8 is Compulsory,
Answer any three questions from the remaining four questions

Question 7:
(1)   Ans. a
(2)   Ans. d
(3)   Ans. d
(4)   Ans. c
(5)   Ans. b
(6)   Ans. b
(7)   Ans. d
(8)   Ans. d   **{1 M Each Point x 15 = 15 Marks}**
(9)   Ans. a
(10)   Ans. b
(11)   Ans. b
(12)   Ans. d
(13)   Ans. c
(14)   Ans. b
(15)   Ans. b

Answer 8:
Yummy foods is proactive in its approach. On the other hand Tasty Food is reactive. Proactive strategy is planned strategy whereas reactive strategy is adaptive reaction to changing circumstances. A company's strategy is typically a blend of proactive actions on the part of managers to improve the company's market position and financial performance and reactions to unanticipated developments and fresh market conditions.   **{2 M}**

If organisational resources permit, it is better to be proactive rather than reactive. Being proactive in aspects such as introducing new products will give you advantage in the mind of customers.   **{1 M}**

At the same time, crafting a strategy involves stitching together a proactive/intended strategy and then adapting first one piece and then another as circumstances surrounding the company's situation change or better options emerge-a reactive/adaptive strategy. This aspect can be accomplished by Yummy Foods.   **{2 M}**

Answer 9:
(a)   Steps to understand the competitive landscape
　　(i)   **Identify the competitor:** The first step to understand the competitive landscape is to identify the competitors in the firm's industry and have actual data about their respective market share.
　　(ii)   **Understand the competitors:** Once the competitors have been identified, the strategist can use market research report, internet, newspapers, social media, industry reports, and various other sources to understand the products and services offered by them in different markets.
　　(iii)   **Determine the strengths of the competitors:** What are the strength of the competitors? What do they do well? Do they offer great products? Do they utilize marketing in a way that comparatively reaches out to more consumers. Why do customers give them their business?
　　(iv)   **Determine the weaknesses of the competitors:** Weaknesses (and strengths) can be identified by going through consumer reports and reviews appearing in various media. After all, consumers are often willing to give their opinions, especially when the products or services are either great or very poor.

{1 M Each Point}

(v) **Put all of the information together:** At this stage, the strategist should put together all information about competitors and draw inference about what they are not offering and what the firm can do to fill in the gaps. The strategist can also know the areas which need to be strengthen by the firm.

Answer:

(b) Mission statement is an answer to the question "Who we are and what we do" and hence has to focus on the organisation's present capabilities, 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. **{2 M}**

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.

The following points must be considered while writing a mission statement of a company.

(i) To establish the special identity of the business - one that typically distinct it from other similarly positioned companies.

(ii) Needs which business tries to satisfy, customer groups it wishes to target and the technologies and competencies it uses and the activities it performs.

(iii) Good mission statements should be unique to the organisation for which they are developed.

(iv) The mission of a company should not be to make profit. Surpluses may be required for survival and growth, but cannot be mission of a company.

{1 M for any 3 Point}

Answer 10:

(a) Divestment strategy involves the sale or liquidation of a portion of business, or a major division, profit centre or SBU. For a multiple product company, divestment could be a part of rehabilitating or restructuring plan called turnaround. **{2 M}**

A divestment strategy may be adopted due to various reasons:

♦ When a turnaround has been attempted but has proved to be unsuccessful.

♦ A business that had been acquired proves to be a mismatch and cannot be integrated within the company.

♦ Persistent negative cash flows from a particular business create financial problems for the whole company.

♦ Severity of competition and the inability of a firm to cope with it.

♦ Technological upgradation is required if the business is to survive but where it is not possible for the firm to invest in it.

♦ A better alternative may be available for investment.

{1/2 M Each Point}

Answer:

(b)

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.	**{1 M}**
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	Liquidation becomes only option in case of severe and critical conditions where either turnaround and divestment are not seen as solution or have been attempted but failed..	**{2 M}**

may even be ignored if it is obvious that divestment is the only answer.		
Efforts are made for the survival of organization.	Liquidation as a form of retrenchment strategy is considered as the most extreme and unattractive.	{1 M}
Survival of organization helps in retaining personnel, at least to some extent.	There is loss of employment with stigma of failure.	{1 M}

Answer 11:

(a) 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 position. Barriers to entry represent economic forces 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.

(iii) **Product Differentiation:** Product differentiation refers to the physical or perceptual differences, or enhancements, that make a product special or unique in the eyes of customers.

(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. 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.

(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.

(vii) **Possibility of Aggressive Retaliation:** Sometimes the mere threat of aggressive retaliation by incumbents can deter entry by other firms into an existing industry.

{1 M for any 5 Point}

Answer:

(b) The financial strategies of an organization are related to several finance/ accounting concepts considered to be central to strategy implementation. These are: acquiring needed capital/sources of fund, developing projected financial statements/budgets, management/ usage of funds, and evaluating the worth of a business. {1 M}

Various methods for determining a business's worth can be grouped into three main approaches which are as follows:

(i) **Net worth or stockholders' equity:** Net worth is the total assets minus total outside liabilities of an organisation. {1M}

(ii) **Future benefits to owners through net profits:** These benefits are considered to be much greater than the amount of profits. A conservative rule of thumb is to establish a business's worth as five times the firm's current annual profit. A five-year average profit level could also be used. {1M}

(iii) **Market-determined business worth:** This, in turn, involves three methods. First, the firm's worth may be based on the selling price of a similar company. The second approach is called the price-earnings ratio method whereby the market price of the firm's equity shares is divided by the annual earnings per share and multiplied by the firm's average net income for the preceding years. The third approach can be called the outstanding shares method whereby one has to simply multiply the number of shares outstanding by the market price per share and add a premium. **{2 M}**

Answer 12:

(a) Strategic leadership is the ability of influencing others to voluntarily make decisions that enhance prospects for the organisation's long-term success while maintaining short-term financial stability. It includes determining the firm's strategic direction, aligning the firm's strategy with its culture, modelling and communicating high ethical standards, and initiating changes in the firm's strategy, when necessary. Strategic leadership sets the firm's direction by developing and communicating a vision of future and inspire organization members to move in that direction. Unlike strategic leadership, managerial leadership is generally concerned with the short-term, day-to-day activities. **{1 M}**

Two basic approaches to leadership can be transformational leadership style and transactional leadership style.

Transformational leadership style use charisma and enthusiasm to inspire people to exert them for the good of the organization. Transformational leadership style may be appropriate in turbulent environments, in industries at the very start or end of their life-cycles, in poorly performing organizations when there is a need to inspire a company to embrace major changes. 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. **{2 M}**

Transactional leadership style focuses more on designing systems and controlling the organization's activities and are more likely to be associated with improving the current situation. Transactional leaders try to build on the existing culture and enhance current practices. Transactional leadership style uses the authority of its office to exchange rewards, such as pay and status. They prefer a more formalized approach to motivation, setting clear goals with explicit rewards or penalties for achievement or non-achievement. **{2 M}**

Transactional leadership style may be appropriate in static environment, in growing or mature industries, and in organizations that are peforming well. The style is better suited in persuading people to work efficiently and run operations smoothly.

Answer:

(b) H.C. Kellman has proposed three methods for reassigning new patterns of behaviour. These are compliance, identification and internalisation.

♦ **Compliance:** It is achieved by strictly enforcing the reward and punishment strategy for good or bad behaviour. Fear of punishment, actual punishment or actual reward seems to change behaviour for the better. **{1$^{1/2}$ M}**

♦ **Identification:** Identification occurs when members are psychologically impressed upon to identify themselves with some given role models whose behaviour they would like to adopt and try to become like them. **{2 M}**

♦ **Internalization:** Internalization involves some internal changing of the individual's thought processes in order to adjust to a new environment. They have given freedom to learn and adopt new behaviourin order to succeed in the new set of circumstances. **{1$^{1/2}$ M}**

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