CHARTERED ACCOUNTANCY PROFESSIONAL III (CAP-III)

Revision Test Paper

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Recently, one incident occurred in the Active Directory (AD) system of the ABC commercial bank. After the incident, the bank hired one of the consultants to investigate the root cause of the incident. The consultant found that the critical log of the AD system was not stored in any centralized log management system, and the log stored in AD was deleted by the hacker. As an immediate recommendation, the consultant has requested the implementation of a centralized log management system. Explain why the implementation of a centralized log management system is important.

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Section 2: Answers:

Answer to Question No. 1:

The key components of IT governance are:

- **Strategic alignment:** IT governance ensures that IT is aligned with the organization's strategic goals and objectives. This means that IT investments are made in support of the organization's business needs, and that IT risks are managed in a way that minimizes their impact on the organization.
- **Risk management:** IT governance includes the identification, assessment, and mitigation of IT risks. This helps to protect the organization from financial losses, reputational damage, and other consequences of IT failures.
- **Performance management:** IT governance ensures that IT is delivering value to the organization. This means that IT is being used efficiently and effectively, and that it is meeting the needs of the business.
- **Resource management:** IT governance ensures that IT resources are used in a way that is aligned with the organization's goals. This includes ensuring that IT budgets are managed effectively, and that IT assets are properly protected.
- **Compliance:** IT governance helps to ensure that the organization complies with relevant laws and regulations. This includes laws and regulations related to data protection, privacy, and security.

These key components of IT governance can be used to protect information security in a number of ways. For example, strategic alignment can help to ensure that security controls are implemented in a way that supports the organization's business needs. Risk management can help to identify and mitigate risks to information security. Performance management can help to ensure that security controls are effective and are being used correctly. Resource management can help to ensure that security controls are properly funded and maintained. And compliance can help to ensure that the organization is meeting its legal and regulatory obligations for information security.

Answer to Question No. 2:

The revision of organization and management level can affect the design and implementation of an information system in a number of ways. When organizations undergo changes in their structure, roles, and management practices, it can necessitate adjustments to their information systems to align with the new operational and strategic objectives. Here are some ways in which this revision can affect the information system:

i. **Changes in need of information:** It can change the information needs of the organization. For example, if there is a new management structure, the information system may need to be redesigned to provide information to the new managers.

ii. **Changes in decision making process:** Revision of organization and management level can changes the decision making process in the organization. For example, if there is a new decision-making body, the information system may need to be redesigned to provide information to the new decision-makers.

iii. **Changes in Data**: Flow and Communication: Revisions in management levels can alter the flow of information within the organization. Information systems must be updated to ensure that data flows smoothly between different levels and departments. This may involve redefining access permissions, data sharing protocols, and communication channels. For example, if there is a new way of communicating between departments, the information system may need to be redesigned to accommodate the new communication channels.

iv. **Changes in security requirements:** The revision of organization and management level can also change the security requirements for the information system. For example, if there are new sensitive data that need to be protected, the information system may need to be redesigned to meet the new security requirements.

v. **Change in user acceptance:** The revision of organization and management level can also affect the user acceptance of the information system. For example, if there are new users who are not familiar with the information system, the information system may need to be redesigned to be more user-friendly.

In summary, the revision of organization and management levels can lead to significant changes in an organization's information system requirements. It is crucial to assess these changes carefully and make necessary adjustments to ensure that the information system remains aligned with the organization's goals, supports efficient operations, and meets security and compliance standards. Additionally, ongoing monitoring and adaptation are essential as the organization continues to evolve.

Answer to Question No. 3:

Banks and financial institutions can use AI in order to streamline different process such as loan sanction process, loan portfolio analysis, deposit collection, customers' categorization, etc. Below are some of the ways that AI is being used by banks in the lending process:

- **Automating document processing:** AI can be used to automate the process of extracting data from loan applications and other documents. This can save banks a lot of time and money, and it can also help to reduce errors.
- **Improving credit risk assessment:** AI can be used to analyze large amounts of data to assess the creditworthiness of borrowers. This can help banks to make more informed lending decisions and to reduce their risk of default.
- **Streamlining the loan approval process:** AI can be used to automate the loan approval process, which can make it faster and more efficient. This can be especially beneficial for small businesses and other borrowers who need loans quickly.
- **Personalizing loan offerings:** AI can be used to personalize loan offerings to borrowers based on their individual needs and circumstances. This can help banks to attract and retain more customers.
- **Detecting fraud:** AI can be used to detect fraudulent loan applications. This can help banks to protect themselves from financial losses.
- **Improved customer experience:** AI can help banks to provide a more personalized and efficient customer experience. For example, AI can be used to answer customer questions, provide loan status updates, and resolve issues more quickly.
- **Increased transparency:** AI can help banks to be more transparent with borrowers about the lending process. This can help to build trust and confidence between borrowers and lenders.
- **Reduced costs:** AI can help banks to reduce the costs of lending. This can be achieved by automating tasks, improving efficiency, and reducing fraud.

AI has the potential to revolutionize the lending process by making it more efficient, accurate, and personalized. Banks that are able to adopt AI-powered lending solutions are likely to have a competitive advantage in the years to come.

Answer to Question No. 4:

Finance and accounting information systems (FAIS) can be used to improve the efficiency and effectiveness of the financial management process in a number of ways. Here are some of the most common benefits:

- **Increased accuracy and timeliness of financial data:** FAIS can help to automate and streamline the financial reporting process, which can lead to more accurate and timely financial data. This information can be used by financial managers to make better decisions about the company's finances.
- **Improved decision-making:** FAIS can help financial managers to access and analyze financial data more easily, which can lead to improved decision-making. For example, FAIS can be used to track trends in sales, expenses, and cash flow, which can help managers to make better decisions about pricing, budgeting, and investment.
- **Reduced costs:** FAIS can help to reduce the costs of financial management by automating tasks and eliminating manual processes. For example, FAIS can be used to automate the processing of invoices, which can save time and money.
- **Improved compliance:** FAIS can help companies to comply with financial regulations by providing a centralized repository for financial data. This data can be used to generate reports that are required by regulators.
- **Enhanced transparency:** FAIS can help to improve transparency by making financial data more accessible to stakeholders. This can help to build trust and confidence in the company.

Also, FAIS can help to automate the reconciliation of bank statements, which can help to prevent errors and improve the accuracy of financial reporting, help to track its inventory levels, which can help to improve its cash flow and reduce its risk of stockouts.

FAIS can be a valuable tool for improving the efficiency and effectiveness of the financial management process. By automating tasks, providing accurate and timely data, and improving decision-making, FAIS can help companies to make better financial decisions and achieve their goals.

Answer to Question No. 5:

Knowledge engineering is the process of extracting knowledge from human experts and representing it in a way that can be used by a computer. This process is not without its challenges, which can impact the effectiveness and accuracy of the resulting expert system. Here are some of the key challenges in knowledge engineering for expert systems:

a) **Knowledge Acquisition**: Obtaining accurate and complete knowledge from domain experts can be challenging. Experts may not be able to fully articulate their knowledge, or they may have tacit knowledge that is difficult to express. Experts may also have different opinions or approaches, leading to inconsistencies in the knowledge base.

b) **Knowledge Representation**: Choosing an appropriate knowledge representation language or framework can be complex. The choice can affect the system's ability to reason and its ease of maintenance. Translating human knowledge into a structured format that a computer can understand and manipulate accurately is not always straightforward.

c) **Knowledge Validation**: Ensuring the correctness and reliability of the knowledge is crucial. Errors or inaccuracies in the knowledge base can lead to incorrect conclusions and decisions. Regularly validating and updating the knowledge base to keep it current and accurate can be resource-intensive.

d) **Knowledge Maintenance:** Expert systems need to adapt to changing domains, regulations, and knowledge. Maintaining and updating the knowledge base over time can be challenging, especially if the original experts are no longer available.

e) **Knowledge Relevance**: Determining what knowledge is relevant to the problem at hand is crucial. Including unnecessary information can make the system more complex and less efficient. On the other hand, omitting critical knowledge can lead to the system making incorrect decisions.

f) **Ethical and Legal Issues**: Ensuring that the knowledge encoded in the expert system complies with ethical and legal standards, especially in fields like healthcare and law, is critical to avoid potential liabilities and controversies.

Despite these challenges, knowledge engineering is a fundamental step in building expert systems that can automate complex decision-making tasks and provide valuable insights in various domains. Advances in machine learning and natural language processing have also contributed to addressing some of these challenges by automating parts of the knowledge acquisition and representation processes.

Answer to Question No. 6:

The government office could implement a database management system (DBMS) with built-in security features such as user authentication, access control, and data encryption to ensure that only authorized personnel have access to sensitive information. The DBMS could also be designed with role-based access control, where different levels of access are assigned to different categories of users based on their job responsibilities and need to know. This would allow for granular control over who can view, edit, or delete information.

In addition, the DBMS could have an audit trail feature that logs all actions performed on the system, making it easier to detect and prevent unauthorized access or changes to the data. By implementing these security features, the government office can ensure that sensitive information is protected while still allowing authorized personnel to access it quickly and efficiently. This can help improve the overall security and privacy of the stored information, while also streamlining data management processes. In terms of functionality, the DBMS could include features such as reporting tools and a user-friendly interface to make it easier for authorized personnel to retrieve data and generate reports. This could significantly improve the efficiency of data retrieval processes and provide a more comprehensive view of the data.

Overall, the implementation of a secure and efficient DBMS can greatly enhance the data management processes for the government office, providing improved security and privacy, as well as increased accessibility and functionality for authorized personnel.

Answer to Question No. 7:

The implementation of a centralized log management system is important for a number of reasons, including:

- **Improved security:** A centralized log management system can help to improve security by providing a single repository for all logs. This makes it easier to identify and investigate security incidents, as well as to detect and prevent future attacks.
- **Reduced costs:** A centralized log management system can help to reduce costs by eliminating the need to purchase and maintain multiple log management solutions. It can also help to reduce the amount of time and effort required to manage logs.
- **Improved compliance:** A centralized log management system can help organizations to comply with regulations that require the retention and analysis of logs. For example, the Payment Card Industry Data Security Standard (PCI DSS) requires organizations to retain all relevant logs for at least one year.
- **Improved efficiency:** A centralized log management system can help to improve efficiency by providing a single view of all logs. This makes it easier to find and correlate logs, which can help to speed up incident response and troubleshooting.
- **Increased visibility:** A centralized log management system can help to increase visibility into the IT environment. This can help organizations to identify potential problems before they cause outages or data breaches.
- **Automated analysis:** A centralized log management system can be used to automate the analysis of logs. This can help to identify potential problems and threats, as well as to generate reports on log data.
- **Real-time monitoring:** A centralized log management system can be used to monitor logs in real time. This can help to identify and respond to incidents quickly.
- **Scalability:** A centralized log management system can be scaled to meet the needs of an organization. This is important as organizations grow and their IT environments become more complex.

In the case of the ABC commercial bank, the implementation of a centralized log management system would have helped to prevent the incident from happening. The critical log of the AD system would have been stored in the centralized log management system, and the hacker would not have been able to delete it. This would have made it easier for the bank to investigate the incident and to take steps to prevent it from happening again. The implementation of a centralized log management system is a sound security investment for organizations of all sizes. It can help to improve security, reduce costs, improve compliance, and improve efficiency.

Answer to Question No. 8:

The contention of his team member is wrong. In the system testing process the system will be checked not only for errors but also to see if the system does what was intended, the system functionality and if it is what the end user expected. System testing is a type of software testing that aims to evaluate the end-to-end functionality of a complete and fully integrated system. It is usually performed to verify that the system meets the specified requirements and to identify any defects or missing features.

There are several types of tests that need to be conducted during system testing, some of which include:

a) **Functional Testing**: to verify that the system performs all required functions correctly.

b) **Performance Testing**: to evaluate the system's speed, stability, and scalability.

c) **Security Testing**: to ensure the system is protected against unauthorized access and data breaches.

d) **Usability Testing**: to check that the system is user-friendly and meets the needs of the target audience.

e) **Compatibility Testing**: to ensure that the system is compatible with different hardware, software, and operating systems.

f) **Recovery Testing**: to verify the system's ability to recover from failures or unexpected events.

g) **Stress Testing**: to evaluate the system's behavior under extreme workloads.

It is important to conduct comprehensive system testing to ensure the developed system is reliable, efficient, and meets the needs of the organization.

Answer to Question No. 9:

Computer-Aided Software Engineering (CASE) provides a number of features and benefits to support the systems development process. Key features of CASE tools include:

- Automated graphics facilities for producing charts and diagrams, screen and report generators, data dictionaries, extensive reporting facilities, analysis and checking tools, code generators, and documentation generators.
- Enforcing a standard development methodology and design discipline.
- Improving communication between users and technical specialists.
- Organizing and correlating design components and providing rapid access to them using a design repository.
- Automating tedious and error-prone portions of analysis and design.
- Automating code generation and testing and controlling rollout.

The benefits of using CASE tools include increased productivity and quality, better communication between technical specialists and users, automated iterative design, and a centralized information repository. However, to be used effectively, CASE tools require organizational discipline, management support, and a culture that appreciates their value.

Answer to Question No. 10:

The type of maintenance being performed when adapting the software to a new environment is **adaptive software maintenance**. Adaptive software maintenance is the modification of a software system to adapt it to changes in the environment, such as changes in hardware or software, government policies, and business rules.

The goal of adaptive software maintenance is to keep the software usable in a changing environment. This may involve changes to the software's code, data, or documentation. Some examples of adaptive software maintenance include:

- Updating the software to support a new operating system.
- Adding new features to the software to meet new requirements.

- Fixing bugs that are introduced when the software is used in a new environment.

Adaptive software maintenance can be a complex and time-consuming process. It is important to carefully plan and execute the changes to ensure that the software continues to function correctly. Here are some of the challenges of adaptive software maintenance:

- The software may not be designed to be easily adaptable.
- The changes may require a deep understanding of the software's code and data.
- The changes may introduce new bugs.
- The changes may impact the performance of the software.

Despite the challenges, adaptive software maintenance is an essential part of keeping software up-to-date and usable in a changing environment.

Answer to Question No. 11:

When preparing a proposal for using object-oriented analysis (OOA) techniques in the development of the financial application for the bank, Mr. Silwal should include key points that highlight the advantages, methodologies, and steps involved in OOA. Here are the key points he should consider:

i. Executive Summary (a concise executive summary that outlines the purpose of the proposal and its key benefits.)

ii. Introduction to OOA

iii. Benefits of OOA: Highlight the advantages of using OOA techniques, such as improved modularity, reusability, maintainability, and scalability of code. Explain how OOA can lead to a more intuitive and efficient design for complex financial applications.

iv. Alignment with Bank's Goals: Emphasize how OOA aligns with the bank's goals for the project, such as achieving a robust and flexible financial application.

v. Project Scope and Objectives: Define the scope of the financial application project, including its functional and non-functional requirements. Clearly state the project's objectives, deliverables, and expected outcomes.

vi. Involvement of Stakeholder: Describe how stakeholders, including end-users, will be involved throughout the OOA process to gather requirements and validate design decisions.

vii. OOA Phases along with timeline and milestones: Explain the different phases of OOA, including requirements gathering, analysis, design, testing, quality assurance and implementation and activities under each phase. Provide a project timeline with key milestones, indicating when specific OOA activities and deliverables will be completed.

viii. Management of the risk: Discuss how OOA techniques can help identify and mitigate risks throughout the project.

ix. Resource Requirements: List the financial, human and technological resources needed for the successful execution of the project.

Mr. Silwal can effectively articulate the justification and strategy for employing object-oriented analytical methodologies in the creation of the financial application, addressing the needs and goals of the bank, by mentioning these crucial aspects in his proposal.

Answer to Question No. 12:

It is a general principle of output design in system design and analysis. This principle means that the outputs of an information system must be designed to meet the needs of the users who will be receiving them. There are a number of factors to consider when designing outputs to be acceptable to users. These factors include:

- **The content of the outputs**: The outputs must contain the information that the users need to make decisions or take action.
- **The format of the outputs**: The outputs must be presented in a way that is easy for the users to read and understand.
- **The timing of the outputs**: The outputs must be delivered to the users in a timely manner, so that they can use the information to make decisions or take action.
- **The accuracy of the outputs**: The outputs must be accurate and reliable, so that the users can trust the information.
- **The security of the outputs**: The outputs must be protected from unauthorized access or modification.

In addition to these factors, it is also important to consider the **culture** and **preferences** of the users when designing outputs. For example, some cultures prefer to have outputs presented in a certain way, or they may have specific requirements for the format of outputs.

By considering all of these factors, system designers can create outputs that are acceptable to the users who will be receiving them. This will help to ensure that the information system is successful in meeting the needs of the users. For designing the outputs to be acceptable to users, following points should be considered:

- ✓ Involve users in the design process
- ✓ Test the outputs with users to get their feedback on the content, format, timing, accuracy, and security of the outputs.
- ✓ Be willing to make changes to the outputs based on user feedback.
- ✓ Not all users prefer the same format for outputs. Use a variety of formats to meet the needs of different users.
- ✓ Use visuals, such as charts and graphs, to make the outputs more visually appealing and easier to understand.
- ✓ Use clear and concise language in the outputs to make them easy to read and understand.

By following these tips, system designers can create outputs that are acceptable to users and help to ensure the success of the information system.

Answer to Question No. 13:

The most likely cause of the customer's stolen credit card information is "Credit card fraud/theft". Credit card fraud/theft is one of the most feared occurrences in e-commerce and a major concern for customers and e-commerce companies alike. This type of security threat often results from lost or stolen credit cards being used by someone else, or from employees stealing customer information. In both cases, the thief gains access to sensitive financial information and can use it for their own purposes, such as making unauthorized purchases.

In the scenario described, a customer reported that their credit card information was stolen after making a purchase on the company's website. This suggests that the information was compromised during the transaction process, which is consistent with credit card fraud/theft. The company's IT team will likely investigate this issue further, perhaps by reviewing transaction logs, monitoring network traffic, and implementing additional security measures to prevent similar incidents from occurring in the future.

It's important for e-commerce companies to take credit card fraud/theft seriously, as it can have serious consequences for both the company and its customers. For the company, credit card fraud/theft can damage its reputation, harm customer relationships, and result in financial losses. For customers, it can result in unauthorized charges, financial losses, and a loss of trust in the company. To minimize the risk of credit card fraud/theft, e-commerce companies should implement strong security measures, such as using secure servers for transactions, using encryption to protect sensitive information, and regularly monitoring their networks for signs of security breaches. By doing so, e-commerce companies can help protect both their business and their customers from the damaging effects of credit card fraud/theft.

Answer to Question No. 14:

Bhatbhateni Supermarket must implement a customer relationship management system (CRM) since it can significantly improve its client-centric strategy and several facets of its business operations. The following highlights the importance of CRM for Bhatbhateni Supermarket and challenges for its implementation.

Importance of CRM for a Supermarket and Departmental Store:

1. **Customer Retention:** CRM helps in building stronger relationships with customers, leading to increased customer loyalty and retention. In a competitive market, retaining existing customers can be more cost-effective than acquiring new ones.
2. **Personalized Marketing:** CRM systems can analyze customer data to provide insights into shopping habits and preferences. This enables targeted and personalized marketing campaigns, improving the effectiveness of promotions and advertisements.
3. **Inventory Management:** CRM can aid in predicting demand and managing inventory more efficiently. By understanding customer purchasing patterns, the store can optimize stock levels and reduce wastage.
4. **Customer Insights:** CRM provides valuable customer insights, helping the store to understand customer needs, preferences, and behaviors. This information can drive better product selection and service offerings.
5. **Customer Support:** Effective CRM systems streamline customer support processes, enabling quick issue resolution and improved customer satisfaction.
6. **Data Security:** It ensures that customer data is stored securely, adhering to data protection regulations, which is crucial for maintaining trust and complying with legal requirements.

Challenges of CRM Implementation:

1. **Data Integration:** Combining data from various sources (point of sale systems, online purchases, customer feedback, etc.) can be challenging. Inaccurate or incomplete data can lead to misguided strategies.
2. **Cost and Resources:** Implementing a CRM system requires a significant investment in technology, software, training, and ongoing maintenance.

3. **Employee Adoption:** Employees must be trained to use the CRM system effectively. Resistance to change and inadequate training can hinder adoption.
4. **Privacy Concerns:** Managing customer data comes with privacy concerns and legal responsibilities. Ensuring data security and compliance with regulations like GDPR is vital.
5. **Customization:** Tailoring the CRM system to meet specific business needs can be complex. A one-size-fits-all approach might not work for all aspects of the supermarket's operations.
6. **Integration with Existing Systems:** Integrating CRM with existing IT infrastructure can be challenging, particularly if legacy systems are in place.
7. **Scalability:** The CRM system should be scalable to accommodate growing data volumes and customer bases.
8. **Customer Expectations:** Implementing CRM sets expectations of better service and personalization. Failing to meet these expectations can lead to customer dissatisfaction.

Answer to Question No. 15:

Virtualization provides an enterprise with a significant opportunity to increase efficiency and decrease costs in its IT operations. Data center and many other organization virtualization techniques to create an abstraction of the physical hardware and make large pools of logical resources consisting of CPUs, memory, disks, file storage, applications and networking. This approach enables greater availability of these resources to the user base. The main focus of virtualization is to enable a single physical computing environment to run multiple logical, yet independent, systems at the same time. At high level, virtualization allows multiple OSs (guest OS) to coexist on the same physical server (host OS) in isolation of one another. Following are the risks associated with Virtualized environment:

i. **Improper/default configuration of the hypervisor** partitioning resources (memory, CPU etc.). It can lead to unauthorized access to resources, one guest OS injecting malware into another or placing malware code into another guest OS's memory.
ii. **Shared resources**: In a virtualized environment, multiple virtual machines share the same physical resources, such as CPU, memory, and storage. This can make it easier for an attacker to exploit a vulnerability in one virtual machine (VM) to compromise other virtual machines.
iii. **Inadequate isolation**: Inadequate isolation between VMs on the same host can allow one compromised VM to affect others.
iv. **Data backup and disaster recovery risks**: Inadequate backup and recovery strategies can result in data loss or extended downtime in case of a failure.
v. **Unauthorized Access:** Unauthorized users or malicious insiders gaining access to VMs, potentially compromising sensitive data or applications.

The risk associated with virtualization environment can be minimized by implementing following security measures:

i. Use properly configured hypervisor from security prospective

ii. **Keep the hypervisor up to date:** Install all security updates for the hypervisor as soon as they are available.

iii. **Isolate virtual machine**: Use network segmentation (VLAN Segregation) or firewalls to isolate virtual machines from each other and from the physical network.

iv. **Use a centralized management platform:** A centralized management platform can help you to manage and monitor all of your virtual machines from a single location. This can make it easier to identify and respond to security threats.

v. **Use of security tools to protect virtual environments**

vi. **Awareness of the employees:** Employees should be aware of the security risks associated with virtualized environments and how to protect themselves. This includes training them on how to create strong passwords, avoid clicking on suspicious links, and report any suspicious activity.

vii. **Use strong passwords and security controls:** Use strong passwords and other security controls to protect the hypervisor and the virtual machines.

viii. **Back up data regularly:** Back up data regularly so that it can be restored if it is lost or corrupted.

Answer to Question No. 16:

When sending computers to a newly set up branch office, it is crucial to ensure the security of the hardware and the data they contain. Following are the minimum security measures the Head Office should take before sending the computers to the branch office:

- Data Encryption - Critical data on the computers should be encrypted, preferably using full-disk encryption. This ensures that even if the hardware is stolen or compromised, the data remains protected.
- Centralized authentication- Implement centralized authentication using Active Directory (or a similar system) for user account management. This ensures that user access and authentication are controlled from a central location, allowing the Head Office to manage access rights and policies for all branch office computers. Through the AD other security policies like password policy, account lockout policy, etc. can be configured.
- Changing of default passwords
- Software Updates and Patch Management- All the operating systems and software on the computers should be up to date with the latest security patches. Set up automatic updates where possible (It can be managed through centralized patch management system).
- Installation of enterprise level Antivirus system
- Employee Awareness Training- Train branch office employees on security best practices, including password management, social engineering awareness, and safe browsing habits.
- Disable Auto-Password Save- Any auto-password save or autofill features in web browsers should be disabled on the computers. Saving passwords automatically can pose a significant security risk if the devices fall into the wrong hands or are accessed by unauthorized individuals.
- Physical Security- Computer should be shipped in secure packaging to prevent tampering during transit.

- Inventory and Asset Management- Keep a detailed inventory of all hardware components, including serial numbers, and maintain this information at the Head Office. Assets tracking system should be implemented to monitor the location and status of the computers.

Answer to Question No. 17:

In the financial services sector, outsourcing technology services can have many benefits, including cost savings and access to specialist knowledge. However, it also comes with its own set of risks and challenges. Following are some of the risks associated with outsourcing of IT operations:

- **Data security:** Financial institutions handle a lot of sensitive data, such as customer account information, personally identifiable information and financial transactions. Outsourcing IT operations to a third-party provider increases the risk of data security breaches.
- **Compliance:** Financial institutions must abide by a number of laws, including those controlling security and privacy. It may be more challenging to adhere to these regulations if IT operations are outsourced to a third-party vendor.
- **Business continuity:** If the third-party provider experiences a disruption, such as a power outage or cyberattack, it could impact the financial institution's ability to operate.
- **Loss of control:** When IT operations are outsourced, the financial institution loses some control over how the data is managed and processed. This could lead to problems, such as poor performance or service disruptions.
- **Vendor Dependency:** Financial institutions may become dependent on the third-party provider, making it difficult to switch providers if necessary.
- **Quality Control:** Maintaining quality control can be challenging when relying on external vendors. The quality of technology services delivered by third parties may not always meet the institution's standards.

With the help of following techniques risk associated with IT outsourcing can be minimized:

- **Conduction of vendor/3rd party due diligence before outsourcing**: When selecting a third-party provider, financial institutions should carefully evaluate the provider's security practices, compliance record, operational and financial stability.
- **A comprehensive contract and Service Level Agreement (SLA)**: A comprehensive contract and SLA should be signed by both the parties which should highlight the clearly defined roles and responsibilities, including the security and privacy of data. All outsourced operations should be subject to financial institution’s information security and privacy policy and financial institution should ensure that outsource service provider implement adequate internal controls, logical access control and physical security controls to ensure the same.
- **Regularly monitor the provider:** Financial institutions should regularly monitor the provider's performance and security practices. A periodic review of operational and financial condition of the outsource service provider should be carried out.
- **Have a contingency plan:** In the event of a disruption from the third-party provider, financial institutions should have a contingency plan in place to ensure that they can continue to operate.

- **Communication and Collaboration:** Maintain open and effective communication channels with the service provider. Foster collaboration to ensure alignment with the organization's goals.

Answer to Question No. 18:

The auditor should follow the following steps while conducting the information system audit of the e-commerce company:

a. **Establish the terms of engagement**: The auditor should set the scope and objectives of the audit with the organization by creating an engagement letter that addresses the responsibilities, authority, and accountability of both parties.

b. **Preliminary review**: The auditor should gather organizational information and create an audit plan based on their understanding of the company's strategy, responsibilities, and accounting system.

c. **Obtain understanding of control structure**: The auditor should examine both management and application controls in the organization to determine the internal control system's efficiency and reliability.

d. **Assess control risk**: The auditor should assess the level of control risk in terms of each major financial statement assertion such as existence, occurrence, completeness, rights and obligations, valuation or allocation, and presentation and disclosure.

e. **Test of controls**: The auditor should test both management and application controls to determine their effectiveness and efficiency.

f. **Reassess controls**: The auditor should reassess the control risk after testing the controls and revise their findings based on the results.

g. **Completion of audit**: The auditor should perform the necessary audit procedures based on their understanding of the organization and its environment and issue an audit report based on their findings.

Answer to Question No. 19:

Some of the benefits of using Computer Assisted Audit Techniques (CAATS) in the auditing process are:

a. **Efficient data analysis**: CAATS can simplify or automate the data analysis process, making it easier to analyze large volumes of data for anomalies.

b. **Improved accuracy**: CAATS can help to reduce the risk of human error in the data analysis process, leading to more accurate results.

c. **Access to advanced tools**: With advancements in technology, CAATS provide accountants with access to many improved tools, making it simpler to obtain data files and perform tests on that data.

d. **Faster results**: CAATS can save time and increase efficiency, allowing auditors to obtain results faster.

e. **Reusability of routines**: Once a routine is created for a specific situation, the same routine can be run from year to year without investing any additional time.

f. **Collaboration and sharing**: CAATS user groups and social networking sites provide access to thousands of routines created and posted by fellow user group members.

Answer to Question No. 20:

To ensure the validity and security of the digital signatures used in their electronic communications, Green Future should take the following steps:

- Choose a reliable digital signature solution provider that offers strong encryption and meets international standards for digital signatures
- Implement a secure key management system to ensure that private keys used for digital signatures are stored securely and are only accessible by authorized personnel.
- Establish procedures for verifying the identity of the signer before a digital signature is applied to a document. This can be done through the use of a secure authentication process, such as two-factor authentication or biometric identification.
- Regularly monitor and audit the digital signature system to ensure that it is functioning properly and that the keys used for digital signatures have not been compromised.
- Provide training to all employees on the proper use of digital signatures and the importance of keeping private keys secure.
- Establish a system for revoking or replacing digital signatures in the event of a security breach or other issue that affects the validity of the digital signature.
- Continuously evaluate and update the digital signature system to ensure that it remains secure and meets the changing needs of the company.

Answer to Question No. 21:

If the controller believes, after completion of an inquiry in connection to any activity of Certifying Authority (CA), made duly, as prescribed, that any of the following circumstances have been occurred, the Controller may revoke a license issued under this Act, at any time, as he deems to be appropriate:

- If the Certifying Authority fails to comply with the liabilities under this act and the rules made thereunder.
- If it is found that the Certifying Authority has submitted false or incorrect document or statement at the time of submitting an application for obtaining a license or for its renewal, as the case may be.
- If the Certifying Authority operates business in such a manner so that it shall make adverse effect to the public interest or to the national economy,
- The Certifying Authority commits any act that is defined as an offence under this Act or the Rules framed hereunder.

The Controller shall, prior to revocation of a license as mentioned above, provide a reasonable opportunity to the Certifying Authority to present his/her defense. Other procedures concerning revocation of a license shall be as prescribed.

Section 3: Exam tips to students:

Tip 1:

Thorough Understanding: Ensure a deep understanding of the key concepts and chapters, especially focusing on high-weightage areas.

Tip 2:

Effective Time Management: Allocate time wisely during the exam. Stick to the allotted time for each question to complete the paper within the given timeframe.

Tip 3:

Practice Tests: Take practice tests and previous years' question papers to get a feel for the exam pattern and improve your exam-taking skills.

Tip 4:

Concise Revision: Prioritize revision of important topics and key points in the days leading up to the exam. Don't try to cram everything at the last minute.

Tip 5:

Stay Calm and Confident: Maintain composure during the exam, and approach each question methodically. Confidence in your preparation can boost your performance.

Paper 6 – Advanced Taxation

1. Income Tax

Question No. 1:

Himal Industries P. Ltd., special industry as per Industrial Enterprises Act 2076, is a resident Nepalese company. Management of the company has provided you the following extracts related to income and expenditure for income year 2080/81:

Particulars	Amount (Rs.)	Particulars	Amount
Opening Stock	10,000	Sales	1,800,000
Purchase of raw materials	600,000	Closing stock	15,000
Freight Inwards	30,000	Gain on sale of business assets	30,000
Direct wages	90,000	Prize from display competition	40,000
Manufacturing Expenses	160,000	Miscellaneous Income	5,000
Administration Expenses	270,000	Income from natural resources	150,000
Interest Expenses	600,000	Bad debts recovered	20,000
Repair Expenses	40,000	Interest received	10,000
Depreciation	198,000		
Entertainment Expenses	22,000		
Miscellaneous Expenses	40,000		
Audit Fee	60,000		
Pollution control cost	550,000		
Advertisement	10,000		
Donation	160,000		
Research and Development Cost	400,000		

Additional Information:

1. Sales include a consignment sold to related person amounting to Rs. 300,000. The transaction is worth Rs. 350,000 in an arms' length dealing. IRD has sent a notification to the company treating it as transfer pricing arrangement and has instructed to book at arm's length price.
2. Purchase includes Rs. 45,000 incurred for purchase of office equipment in Magh 2080.
3. Administration expenses include a cash payment of Rs. 70,000 to a constitutional body.
4. Opening WDV of assets are: Building Rs. 13,00,000: Plant & Machinery Rs. 250,000: Office Equipment Rs. 110,000.
5. Repair expenses include Rs. 25,000 of building and Rs. 15,000 of office equipment.
6. Donation was made for conservation and promotion of religious heritage in Nepal with the prior approval of IRD.
7. Out of bad debts recovered, 25% was not allowed previously.
8. Interest expenses relate to interest paid to owner entity. The company's ownership lies with non-resident persons - 25 percent and associated persons of non - resident persons – 15 percent.
9. Expenses related to natural resource Rs. 15,000 was not recorded in above statement.
10. No advance tax has been deposited during the year and advance tax return was not also deposited.
11. Extension for filing IT return has been taken up to Poush 2081 but the return is filed on Magh 15 2081. Number of days in a month is 30.
12. Ignore interest under section 118 of the act.

You are required to calculate the following with relevant working notes and relevant provisions and explanations:

a) Taxable Income, Tax Liability, Fines and Interest.

b) Explain with reference to provision of the Income Tax Act on transfer pricing arrangements and authority of the Income Tax Department on the same.

c) If Himal Industries P. Ltd. is based in highly undeveloped (Ati Avikasit) area, is there any additional concession available as per Income tax act?

Question No. 2:

Below is opening WDV of fixed assets of Hetauda Cement Limited as on 2080.04.01 as per Income Tax Act,2058:

Building	Furniture and Office Equipment	Vehicles	Plant and Machinery	Intangible Asset
15,00,00,000	90,00,000	30,00,000	50,00,00,000	7,00,000

Transaction during income year 2080/81 are as below –

i) The company constructed office building on 2080.11.01 for Rs. 5,00,00,000.

ii) The company purchased new computers for Rs. 20,00,000 on 2080.08.15, and new furniture on 2081.02.05 for Rs. 25,00,000.

iii) The company has taken loan of Rs. 3,50,00,000 on 2080.01.01 and paid to vendor for purchase of new plant and machinery. Out of the said loan amount, Plant and Machinery of Rs. 2,00,00,000 has been purchased and put to use on 2081.01.01. Remaining plant and machinery is yet to be put to use. Total interest expenses for the loan is Rs. 52,50,000 from date of loan till 2081.03.31.

iv) The company has purchased new ERP system on 2081.02.01 with useful life of 9 years and 10 months for Rs. 1,00,00,000.

v) The company sold its old furniture for Rs. 5,50,000.

vi) The company sold its only car for Rs. 17,00,000.

vii) Balance of intangible asset is for purchase of ERP software which was purchased 5 year back with useful life of 5 years.

viii) Below is repair and maintenance expenses for the income year 2080/81 :

Building	Furniture and Office Equipment	Vehicles	Plant and Machinery
2,00,00,000	7,00,000	2,00,000	2,20,00,000

You are required to calculate depreciation as per Income Tax Act, 2058 for the income year 2080/81 and opening WDV for income year 2080/81.

Question No. 3(a):

Gurans Nepal Company Limited had filed its self-assessment income tax return for FY 2080/81. The return has been opened for reassessment. The company does not agree with everything that has been reassessed and decided to file for Administrative Review (AR). Not all that was objected by company was addressed by AR. It then filed case at Revenue Tribunal (RT). You are required to calculate the tax payment required for AR and appeal at RT.

Self-assessed Tax	13,000,000
Advance Tax deposited	16,000,000

Reassessed tax including interest & penalty	19,000,000
Tax related to undisputed items before AR	1,400,000
Tax related to undisputed items before RT	1,600,000

What other option will the Company have if they do not have funds for filing the appeal?

Question No. 3(b):

Ms. Sita Gurung, a married person, got divorced this year, as part of settlement she got a house which was bought at Rs. 200 lakhs (market value Rs. 250 lakhs) as compensation from her husband. She had shares which she purchased for Rs. 20 lakhs (market value Rs. 25 lakhs). She leaves the country to settle abroad just after the divorce settlement.

Her only surviving parent dies and she inherits the property which was purchased at Rs. 200 lakhs and has a market value of Rs. 700 lakhs on the date she took over. After staying abroad for few years she comes back to Nepal and sells the shares for Rs. 30 lakhs and the building she got as part of her divorce settlement for Rs. 260 lakhs.

The inherited property has been taken over by the government as part of the road expansion plan after giving compensation of Rs. 690 lakhs. She chooses to apply involuntary disposal with replacement later buys similar property within 6 months of the takeover by the government for Rs. 700 lakhs.

What are the tax consequences on above transactions? Mention the incomings and outgoings value on each of the transactions.

Question No. 4(a)

Sunrise General Insurance Ltd. has provided the following information for FY 2080/81.

Particulars	**Amount (Rs.)**
Net Premium Received	848,000,000
Commission on insurance ceded	88,800,000
Opening unexpired risk reserve	281,000,000
Opening claim outstanding	40,020,000
Commission on reinsurance accepted	19,300,000
Agent commission payments expenses	26,200,000
Management expenses	193,000,000
Claim paid during the year	193,000,000
Closing claim outstanding	52,000,000
Interest income on Fixed Deposits (Gross)	77,000,000
Depreciation	192,240,000
Miscellaneous income	45,500,000
Claim received from reinsurance	87,500,000
Carried forward loss from FY 2079/80	187,000,000

Additional Information:

a. Sale of salvage accepted by company from the insured at the time of claim settlement of Rs. 50,850 (including VAT) was not recorded above.
b. Depreciation expenses as per Income Tax Act 2058, is Rs. 88,000,000.

c. Management expense includes: Telephone expense of Rs. 130,000 for Jestha 2080.

Calculate the taxable income and tax liability.

Question No. 4(b):

Sundar Infotech Private Limited has income tax outstanding of Rs. 60,00,000 for various income years which it had failed to pay within prescribed time limit. Inland Revenue Department has requested in writing to the concerned authorities of Government of Nepal to stop the CEO and CFO of the Company from leaving Nepal for 6 months. The contention of the CEO is since payment of Income Tax is financial matter, he should not be held responsible, and contention of the CFO is since it is duty of the CEO to arrange for fund for payment of Tax, he should not be held responsible for payment of the tax. Further, there contention is, it is shareholders of the Company who are ultimate owners of the Company and should be held responsible. And hence, the order of income tax department to stop them from leaving Nepal is ultra-virus to the provisions of law.

Describe the relevant provisions of the Income Tax Act, Advise:

i) Whether the action of Inland Revenue Department is ultra-virus to the provisions of the law or not.

ii) What are the remedies available to the CEO and CFO of the company?

Question No. 5:

Hasila Nepali Party is a political party registered with Election Commission of Nepal. It had following transactions in the financial year 2080/81. You are required to calculate the taxable income and tax liability for the year, ignore the interest and penalties.

Particulars	**Amount**
Membership fees received from members	6,500,000
Levy received from members	900,000
Interest received from banks	2500,000
Building rent received	350,000
Income from sale of merchandise	550,000
Income from sale of scrap	55,000
Royalty from canteen operator	333,000
10 set of computers donated by party supporter (market value Rs.1,000,000) for general election campaign	
Election related expenses	3,000,000
Travelling expenses	450,000
Refreshment expenses	200,000
Other office expenses	400,000

Question No. 6:

An entity seeking approval of retirement fund requests for your expert advice on approval procedures of retirement fund as per Income Tax laws and also on below mentioned matters:

i) Are there any conditions to be fulfilled by such retirement funds?

ii) If there are any conditions to be fulfilled by such entity and if the entity breaches such conditions, can the Inland Revenue Department cancel its approval?

iii) Does the act mention about its taxability and calculation of income for taxation purpose?
iv) If approval of retirement funds is cancelled, will there be difference in its taxation as per the Act?

Provide your answer based on the provisions of Income Tax Act and Rules.

Question No.7:

Krishi supplier having sole proprietor Mr. Riwaz, located at Pepsicola, Kathmandu is an importer of agricultural products in Nepal. You are required to calculate the withholding taxes to be paid/deducted by Krishi supplier on the following transactions for the Income Year 2080/81 highlighting the relevant provisions of Income Tax Act, 2058.

i) Import of garlic for business purpose from India, the import price is Rs. 880,000 whereas customs valuation is Rs. 1,080,000.
ii) Import of rice for business purpose from India, the import price is Rs. 1,220,000 whereas custom valuation is Rs. 1,020,000
iii) Import of rice for household consumption from India, the import price is Rs. 35,000 whereas custom valuation is Rs. 45,000
iv) Rent paid to Mr. Manish, owner of the warehouse.
v) Disposed a plot of land which is in the name of Krishi supplier, the cost of the land was Rs. 45 lakh and sale price is Rs. 55 lakh. The holding period is 5 years.
vi) Transportation service amounting to Rs. 333,000 paid to the owner of a truck, service provided from customs point to the warehouse.
vii) Commission paid to a local agent amounting to Rs. 339,000 including VAT.

Question No. 8:

Lily Construction, a company incorporated in Singapore has been awarded a consulting service by Civil Aviation Authority of Nepal to renovate Tribhuvan International Airport. Unsure about Nepalese legal system it wants to know how such foreign entities are treated for tax purposes in Nepal. What conditions it must fulfill to be a taxable entity in Nepal? Provide your view as per Income Tax Act, 2058.

Question No. 9:

Mr. Nischal Aryal is working as financial manager of Gulab General Insurance Ltd. As per the requirement of Social Security Fund (SSF), Lifeline Insurance Ltd. is registered on 10th Poush 2079. However, deposit in SSF is started from start of Magh 2079. Insurance Company is complying Labour Act, 2074. Following is the details of income of Mr. Nischal Aryal for FY 2080/81:

S.N.	Particulars	Amount (Rs.)
1	Monthly salary as per appointment letter	85,000
2	Medical Allowance	33,000
3	Festival Allowance	55,000
4	Children’ Education Allowance	90,500
5	Bonus as per Bonus Act	3,50,000
6	Loan Installment of Vehicle Paid by Employer	2,20,000
7	Annual performance allowance	90,000

8	Insurance Compensation (For COVID 19 Insurance Policy- Entire Premium is paid by Company)	110,000
9	Leave encashment	75,000

- Before the deposit in SSF, company is depositing gratuity of its employee at CIT.
- Mr. Nischal also donated Rs. 90,000 to a tax exempt organization.
- Mr. Nischal also deposited Rs. 225,000 in CIT.

  From the above information, you are required to compute the taxable income and tax liability of Mr. Nischal Aryal.

Question No. 10:

Quantify the value of perquisite as per the provision of Income Tax Act, 2058 provided by a resident company to its employees and others in the following cases:

i) Vehicle facility is provided to Mr. Suman, an employee for official purpose having Basic salary and grade amounting to Rs. 60,000 per month and Rs.10,000 per month respectively. WDV of vehicle is Rs 20 lakhs.

ii) Vehicle facility is provided to Mr. Krishna, a Manager for both official and personal purpose having Basic salary and grade amounting to Rs.80,000 and Rs.15,000 respectively. Cost of vehicle is Rs 38 lacs. In addition, drivers allowances of Rs. 20,000 per month is paid, petrol cost is Rs. 12,000 per month.

iii) Accommodation facility is provided to Mr. Hari, technical in charge having annual remuneration of Rs. 17 lacs. The company paid rent of Rs 7,000 per month for the flat.

iv) Subsidised term loan is provided to Mr. Carlos, an employee @4% p.a. The market rate of interest is 8% p.a. The average outstanding loan amount for the year is Rs. 12 lacs.

v) Accommodation Facility is provided to Mrs. Jenny, a consultant hired for consultant charges of Rs. 13 lacs for 8 months. The company paid rent of Rs 30,000 per month for the building.

2. International Taxation

Question No. 11:

Based upon the Double Taxation Avoidance Agreements (DTAAs) with India, find out the taxability of the following transactions citing the relevant DTAA provision:

S. N.	Transaction	Taxable In Nepal - Yes or No?
1.	Ministry of Foreign Affairs Nepal paid to a Training Institute in India.	
2.	Everest Bank Ltd., Nepal, a subsidiary of Punjab National Bank, India paid director's fees to its director from India, who visits Nepal only for occasional meetings.	
3.	Mr. Abdul Khan, an Indian Resident, has a house in Kathmandu and gets rent on a monthly basis.	
4.	Mr. Saroj, a Nepali Resident has operating a restaurant in Laxminagar, New Delhi.	
5.	The income of Vistara Airlines from the DEL-KTM-DEL route.	

3. ETHICS AND PROFESSIONAL CONDUCTS IN PROVIDING TAXATION SERVICES

Question No. 12:
A Chartered Accountant in practice is providing assurance services to a multinational private company operating in Nepal. The company requests him to provide his professional support in resolution of tax disputes with Inland Revenue Department at Revenue Tribunal. To what extent does the Chartered Accountant can oblige the company in such offer? Your answer should be based on the Code of Ethics of ICAN.

4. VAT

Question No. 13:
Major fire in the store three months ago where it lost its stock and only could salvage items worth Rs. 50 lakhs in good condition. As per the surveyor's report Rs. 18 lakhs worth of stock was lost for which compensation was provided by the insurance company. Remaining stock could not be traced. On further scrutiny of internal records, it was found that stock worth Rs. 8 lakhs were returned to the supplier due to their quality, the supplier had not provided the replacement of the goods as on the date of fire.

As an expert in this matter mention the consequence to Luxurious Furniture and Fittings on above loss as per VAT Tax and Rules.

Question No.14:

Annapurna Private Limited is a service company operating in Pokhara. It has following transaction in the month of Jestha 2080. You are required to calculate total VAT payable for the month and the carry forward of VAT credit, if any. Amount is in rupees unless otherwise indicated.

1)	Opening VAT	8,500
2)	Purchase of wall painting from an artist	50,000
3)	Purchase of services from abroad	133,000
4)	Purchase of 1 gold coin	55,000
5)	Purchase of iPad	100,000
6)	Sale proceed of old motorbike	20,000
7)	Write-off of software not fully depreciated	22,000
8)	Service sold to company in Pakistan	$12,000
9)	Sale of services locally	5,550,000
10)	Purchase of electric vehicle	3,030,000

Note:

i) USD rate on the date of invoicing was Rs. 129 per USD however the rate was Rs. 123 on the payment date. Both the dates were within Jestha month.
ii) Transaction amount mentioned above are exclusive of VAT wherever applicable.
iii) The gold coin was purchased for award to an employee while the iPad was gifted to a client.

Question No.15:
Write in short about Reverse Charging and conditions for zero rate of tax as per VAT Act, 2052.

Question No. 16:

M/s Import Trading, a proprietorship firm of Mr. Hari Bahadur Karki registered with Value Added Tax, imports VAT applicable trading goods from the United Kingdom and sells it in Nepal. During the month of Mangsir 2080, the transactions of the firm are as follows:

i. Three consignments were cleared from Birgunj Customs Office with payment of import duty, excise duty and value added tax during the month. The details of costs in relation to those consignment are as follows:

Consignment No.	CIF-cost Birgunj	Excise Rate	Customs Rate
A	5,000,000	18%	20%
B	6,500,000	Exempt	25%
C	12,000,000	15%	10%

ii. There were sales of Rs. 20,000,000 during the month from the firm.

iii. The total electricity expense is Rs. 80,000 during the month for the sales outlet.

iv. Mr. Hari Bahadur purchased a car in the name of the firm for Rs. 6,000,000 during the month. It is expected that the car is not used wholly in the business. The petrol expense for the car is Rs. 40,000 in abbreviated tax invoice and Rs. 15,000 with proper Value Added Tax invoice.

v. There is a generator in the sales outlet. Petrol for the generator is Rs.45,000 during the month with proper VAT invoice.

vi. Most of the assets for the sales outlet are directly purchased by the sole proprietor, payment being made in cash. The invoices related to purchase are then provided to the accountant for the purpose of keeping record. During the month of Mangsir, the accountant received a balance confirmation request from two vendors to confirm the balance for Fiscal Year 2079/80. The accountant was surprised and asked the owner, if there were any such transaction during that year, as the accounting record does not reflect the transaction with the vendor. The owner then checked his drawer and provided two invoices dated 2079 Shrawan 4 of Rs. 300,000 (related to purchase of a generator, used in another firm M/s Ram Imports) and 2079 Poush 15 of Rs. 5,00,000 (related to purchase of furniture to renovate the shop). These have not been claimed as credit so far.

vii. A building is self-constructed by the firm with total cost of Rs. 4,600,000 (depreciated value of Rs. 3,000,000 as on Mangsir 2080) used as sales outlet. It was built five years before. During the month of Mangsir 2080 total cost of Rs. 600,000 is incurred on the construction of a room in the building premise adjacent to the current building, of which Rs. 250,000 is related to labour for which there is no Value Added Tax invoice. The construction of the building is completed. On scrutiny of the building ledger, it was identified that a total of Rs. 700,000 was incurred as labour cost in constructing the current building for which there is no value added tax invoice. There is value added tax invoice for all other cost-items of the building.

viii. Mr. Hari wants to start an export business. For this, he hired a firm of Germany to provide him the report of German market for Rs. 3,000,000. This service was received by M/s Import Trading. The report was obtained during the month of Mangsir, however, the payment has not been made.

Hari Bahadur has another firm, M/s Hari Imports that imports goods from India. During the month of Mangsir 2080, one consignment was released from Tribhuvan International Airport Customs office, Kathmandu. The invoice raised by the Indian Party is Rs.,3500,000, the transport cost as per airway bill is Rs. 220,000 and that declared by the importer is Rs. 250,000.

The insurance and other associated cost are Rs. 250,000. The rate of customs duty is 14%. Ignore rebate as per Finance Act for import from India. Excise duty is not applicable.

All the consignments from M/s Hari Imports have been sold during the month with gross profit margin of 10%. There is no additional cost in bringing the goods to warehouse in Nepal.

All above items unless specified are exclusive of VAT.
You are required to compute Value Added Tax liability, if any, of the firm.

5. EXCISE DUTY

Question No. 17(a):

Hangover Beverage Private Limited is engaged in the manufacturing and sale of liquors. Some of the excise sticker issued by the Excise office got damaged during manufacturing and packaging process. Please advise management of the Company on the provisions contained for the write off of the damaged stickers in Excise Act 2058 and Rules 2059.

Question No. 17(b):

Baren Juice industry is producing various juices and selling to the distributors. The industry's production cost is Rs. 70 per liter and it sells adding 10 % value addition on production cost. An Excise officer inspected the factory premises and juice issue point of the industry on 15 Magh, 2080. He found shortage of 500 liters Juice in the stock pertaining to the period of Kartik, 2080. The excise officer realized that the industry has no intention of the fraudulent monthly excise return. However, he issued a notice on 15 Falgun, 2080 penalizing under section 16 in addition to the assessment to the industry on the shortage stocks. The excise duty of juice is Rs. 12 per liter. The management needs your advice on the following issues, advice by citing the relevant provisions of excise act and rules.

i) Whether the Excise officer is correct to assess the excise amount and penalize on the shortage of juice?
ii) If the management realized the actual stock shortage shown by the excise officer. What are the consequences of Excise Act on this shortage items?

Question No. 18(a)

Ramkrishna Hari Limited, an excise licensee, intends to convert spirit into denatured spirit and intends to sell anhydrous ethanol to Nepal Oil Corporation for mixing with petrol. As an expert, you have to provide your answer whether excise rules allow usage of such spirit or sale of ethanol for other purposes.

Question No. 18(b)

Bhaktapur Liquor (Pvt.) Ltd. has the following stocks. Analyze and suggest the company about the shortages as per Excise Rules, 2064.

	Stock as per Record	**Stock as per Physical Verification**
Liquor	80,000 litres	79,000 litres
Beer bottles after pasteurization, packaging and storing	Stock as per record	Stock as per physical verification
	100,000 bottles	97,000 bottles

6. CUSTOM DUTY

Question No. 19(a)

Comfy Shoe, which got the license of bonded warehouse did not renew the license before Ashadh 2080, however the license was renewed on 25th Ashwin 2080 after paying additional fee. In the meantime on 5th Ashwin 2080 it imported goods worth 2 crore from India and Customs Office demanded the payment of duty instead of bank guarantee.

On 5th Kartik 2079 it imported items valued Rs. 22 crores as raw material to execute an order under bonded warehouse facility and on 5th Poush 2080 exported the ordered quantity valued at Rs. 27.5 crores that were manufactured with the imported raw materials. It normally executes the orders within 6 months but this time due to certain reason it took longer to fulfill the order. Customs Office serves the notice to recover the duty from bank guarantee, whether such act was valid, was there any remedy available to Comfy Shoe? Examine citing the provisions of Customs Act and Rules.

Question No. 19(b)

TOYOTA, a car manufactured in 2013, was imported in Nepal in 2016 by a project under customs duty privilege by paying 1% customs duty. The value determined at the time of import was FCY 25,000.00 and rate of exchange was Rs. 110 per FCY. The custom duty of Rs. 27,500.00 was paid as 1% whereas excise duty and VAT were exempted. On July 14, 2023 the project has allowed the General Manager in Nepal to get free ownership of the car. But the GM has to pay all duties and taxes, in case payable. All supporting documents have been submitted to the custom office for clearance on 30 July, 2023. The custom tariff 80% and excise duty 60% are applicable for such imported car. The exchange rate on 30 July is Rs. 129 per FCY. Calculate all duties and taxes payable to the customs office.

Question No. 20(a):

Ghandruk Cables Pvt. Ltd. has been importing raw materials from Tokyo since last two years. On 15th of Ashwin 2080 one consignment of 3 tons of raw materials has arrived at Kakarbhitta Dry Port Custom Office. The company asked its clearing agent for clearing the goods from Custom and sending them to its factory at Pokhara. You are given the following information with respect to this consignment:

Particulars	**Amount in Rs.**
Cost of purchase (as per supplier invoice)	550,000
Insurance	10,500
Letter of Credit Charges related to import	9,000
Sea Freight up to Kolkata	60,000
Transportation from Kolkata to Kakarbhitta Custom Office	33,000

Transportation from Kakarbhitta to Factory	19,000
Other expenses on the way to Pokhara	1,000

The supplier has agreed to provide the volume discount @7% of the invoice value. Determine the amount of custom duty to be paid for this consignment. The rate of custom duty for this type of items is 25%. Ignore other taxes.

Further, calculate the demurrage if the goods could be cleared only on 30th Ashwin 2080.

Question No. 20(b):

Golcha Agro Private Limited has imported hatchery plant set at the cost of USD 105,000 FOB France. The goods arrived at customs point on 10 Jestha 2080, and customs agent filed Bill of Entry (Pragyapan Patra) on the same date. Transport bill of USD 2,100 and insurance bill of Rs. 19,800 was also submitted. Packing charge of USD 4,000 has also been incurred for the same. The custom's officer refused to accept the invoice value of the machine set stating that it is under invoiced, and fixed transaction value of USD 130,000 on the basis of similar machinery imported by another importer in the same month and made assessment on 20 Jestha 2080. Rate of customs duty on the said machine on 10 Jestha 2080 was 20% and 1 USD = Rs. 111, and rate of customs duty on the said machine on 20 Jestha 2080 was 25% and 1 USD = Rs. 120. Customs officer applied rate of 20 Jestha 2080 for USD and custom duty. Golcha Agro Private Limited is not satisfied by the assessment done by the customs officer. Stating the relevant provisions of the Customs Act, 2064 and Rules 2064, advise the management of the Golcha Agro Private Limited regarding process to be followed for correction of the same, and calculate the total customs duty payable by the company.

Answers:

Answer No. 1 (a):

		Rs.		Rs.
Income from Business				
Sales (W.N.1)		18,50,000		
Net gain on sale of business assets		30,000		
Prize from display competition		40,000		
Miscellaneous Income		5,000		
Bad debts recovered (75%)		15,000		19,40,000
Less: Allowable Deductions				
Cost of stock (W.N.2)		830,000		
Administration expenses		2,70,000		
Depreciation (W.N. 3)		183,334		
Repair expenses (W.N. 3)		34,800		
Entertainment expenses		22,000		
Miscellaneous expenses		40,000		
Audit Fee		60,000		
Advertisement		10,000		(14,50,134)
Assessable Income from business before PCC, R&D cost and interest expenses			489,866	
Less:				
Interest Expenses (W.N. 4)			3,22,433	
Assessable Income before PCC, R&D cost			1,67,433	
Less: Pollution control cost			2,44,933	
Less: R & D Cost (W.N.5)			2,44,933	
Assessable Income from Business			(3,22,433)	
Income from Investment:				
Interest received	10,000			
Income from natural resource	150,000		1,60,000	
Less:				
Expenses related to natural resource			(15,000)	
Assessable Income from Investment			**1,45,000**	
Total assessable income			(1,77,433)	
Less:				
Donation (W.N. 6)			-	
Taxable Income			(1,77,433)	
Tax Liability @20%			**-**	

Calculation of Fines as per section 117

1. Fines for not filing of advance tax return

   (5000 or 0.01% of assessable income)

   Since assessable income is negative, fine =5000

2. Fines for late filing of tax return

(19,40,000 Plus 125,000 i.e. Rs.20,65,000 *0.1%*98/365 or Rs. 100 per Month whichever is higher)	554

3. Interest as per section 119

   Since tax liability is negative, no interest is to be charged.

Working Notes:

1. Sales has to be shown at arm's length price by adjusting the sales given. Hence, figure of sales shall be increased by 50,000. Now adjusted sales shall be 18,00,000 plus 50,000 i.e., 18,50,000.

2. Cost of stock: Opening stock + Purchases + Freight + Direct wages + Manufacturing Expenses – Closing Stock

   = 10,000 +(600,000 – 45,000) + 30,000+ 90,000+1,60,000- 15,000
   = 830,000

3. Calculation of Depreciation:

	Block A	Block B	Block D
Opening WDV	13,00,000	1,10,000	2,50,000
Addition (45,000 *2/3)		30,000	
Depreciation Basis	13,00,000	140,000	2,50,000
Depreciation Rate	6.67%	33.33%	20%
Depreciation	86,667	46,667	50,000

Total Depreciation Rs. 183,334

(Depreciation rate is normal rate plus additional 1/3 of normal rate)

Calculation of Allowable Repair:

	Block A	Block B	Block D
Depreciation Basis	13,00,000	1,40,000	2,50,000
7% Limit	91,000	9,800	17,500
Actual Expenses	25,000	15,000	
Allowable	25,000	9,800	

Total Allowable Rs. 34,800

4. Calculation of Interest

   Interest was paid to owner entity. The company's ownership lies with non-resident persons 25 percent and 15 percent associated persons of non- resident persons. As per section 14(2) of the act, an entity is deemed to be resident entity controlled by exempt organization for any income year, in case the entity is resident and specified entities including non- resident persons and/ or its associated persons hold at least 25% shares at any time during the income year. In case a resident entity controlled by exempt organization pays interest to controlling entity, then the interest allowable is the lower of actual interest paid or 50% of entity's adjusted taxable income for the year. ATI shall be calculated without including the interest income and the interest expense, Pollution control cost, research and development expense and donation.

Assessable Income from business before PCC, R&D cost and Interest expenses	489,866
Assessable Income from Investment before Interest Income	1,35,000
ATI	624,866

Allowable Interest expenses to controlling entity

Interest Rs. 10,000

50% of ATI <u>Rs. 312,433</u> 3,22,433. Since the calculated amount is lower than the interest expenses paid Rs.600,000, hence Rs. 3,22,433 is allowable.

5. Calculation of Pollution Control Cost and R& D Cost:

   ATI = 489,866
   50% of 489,866= Rs. 2,44,933 or actual whichever is lower is allowable.
   Pollution control cost = Rs. 2,44,933 (being lower than actual cost of Rs. 5,50,000)
   R & D cost = Rs. 2,44,933 (being lower than actual cost of Rs. 4,00,000)

6. Donation: As donation was made for conservation and promotion of religious heritage in Nepal with the prior approval of IRD, as per section 12 ka of the Act, limit of claim is the minimum of actual expenditure or 10% of the assessable income or Rs. 10 Lakhs. Here, since assessable income is negative (loss), no donation expenses is admissible.

7. As per section 21(2) of the Act, if a person, having annual turnover of Rs. 20 lakhs, makes an expenditure by cash for amount more than Rs.50,000, then the expenditure is not deductible. But the exception is for constitutional body, hence it is allowable.

Answer No. 1 (b)

As per Sec. 33 of Income Tax Act, 2058; where there is reduction of tax liability due to transfer pricing arrangement between associated persons, the tax authority can make transfer pricing adjustments. The Transfer Pricing Guidelines issued by OECD contains the methodologies to make transfer pricing adjustments along with the guidelines on how to determine whether there is reduction of tax liability due to transfer pricing arrangements.

Legal provisions of Transfer Pricing adjustments are invoked by tax authority as part of amended assessment process under Sec. 101. It means, if the taxpayer thinks that there is transfer pricing risk, it has to adjust the invoice issued to the associated enterprises or be ready with its argument to defend that the invoices have been raised at arm's length.

Answer No. 1 (c)

If Himal Industries P. Ltd. is based in highly undeveloped (Ati Avikasit) area, additional concession of 90% of applicable tax rate would be available. Then, tax amount is to be calculated at (20-20*90%) =2% rate.

Answer No. 2:

Depreciation Chart

	Building	Furniture and Office Equipment	Vehicles	Plant and Machinery	Intangible Asset
Opening WDV	15,00,00,000	90,00,000	30,00,000	50,00,00,000	7,00,000
Addition:					
till Poush – 100%		20,00,000			
Magh – Chaitra – 2/3rd	3,33,33,333				
Baishakh – Ashadh – 1/3rd		8,33,333		68,66,667 W.N.1	33,33,333
Total	18,33,33,333	1,18,33,333	30,00,000	50,68,66,667	40,33,333
Less: Sale		(5,50,000)	(17,00,000)		
Balance	18,33,33,333	1,12,83,333	13,00,000	50,68,66,667	40,33,333
Depreciation Rate – Special Industry	6.67%	33.33%	26.67%	20%	
Total Depreciation	1,22,22,222	3,761,111	13,00,000	10,13,73,333	10,33,333 W.N.3
Balance	17,11,11,111	74,44,445	0 W.N.2	40,54,93,334	30,00,000
Balance Capitalization					
Magh – Chaitra – 2/3rd	1,66,66,667				
Baishakh – Ashadh – 1/3rd		16,66,667		1,37,33,333	66,66,667
Excess of repair and Maintenance W.N.4	71,66,667				
Opening WDV for Next Year	18,77,77,778	91,11,112	0	41,92,26,667	96,66,667

W. N. 1

(a) Capitalization of Interest:

Total Interest Expenses for Plant and Machinery	52,50,000
Total tenure of Loan	15 Months
Interest Expenses related with used Plant and Machinery (52,50,000/3,50,00,000*2,00,00,000)	30,00,000
Interest Expenses of Last income year related with used Plant and Machinery (interest of current income year will be charged to income statement) – of 3 Months – (30,00,000/15*3) – which is to be Capitalized	6,00,000
Plant and Machinery put to use	2,00,00,000
Total Addition of Plant and Machinery	2,06,00,000
Total Addition of Plant and Machinery Addition – 1/3	68,66,667

W.N.2

Company had only one vehicle which it had already sold. So, the balance of the block of vehicle will be charged as terminal depreciation.

W.N.3

Calculation of Depreciation of Intangible Asset:

Rate of Depreciation for New ERP (1/10years)	10%
Depreciation on New ERP for the Year – 10% of 33,33,333	3,33,333
Depreciation for Old ERP	7,00,000
Total Depreciation of Intangible Asset	10,33,333

W.N.4

	Building	Furniture and Office Equipment	Vehicles	Plant and Machinery	Intangible Asset
Closing WDV	18,33,33,333	1,12,83,333	13,00,000	50,68,66,667	40,33,333
7% of Closing WDV	1,28,33,333	7,89,833	91,000	3,54,80,667	2,82,333
Actual Repair and Maintenance	2,00,00,000	7,00,000	2,00,000	2,20,00,000	0
Excess to be Capitalized	71,66,667	0	0	0	0
			Since there is no block, remaining 1,09,000 is allowed U/S 13.		

Answer No. 3(a):

Calculation of Payment & Deposit for AR as per Section 115(6)

Particulars	**Amount**
Self-Assessed Tax	13,000,000
Reassessment of Tax	19,000,000
Total Differential Tax	6,000,000
Tax related to undisputed items before AR	1,400,000
Disputed Item of Tax	4,600,000
Excess Advance Tax deposited (A)	3,000,000
(Advance tax less, self-assessed tax)	
Deposit required - 25% of the disputed U/s 115(6)	1,150,000
Payment required - 100% of undisputed U/s 115(6)	1,400,000
Total Payment and Deposit required (B)	2,550,000
Excess Advance Tax (A - B)	450,000

Therefore, no additional payment required for AR.

Calculation of Payment & Deposit for RT

Particulars	**Amount**
Total Differential Tax	6,000,000
Tax related for undisputed items before AR	1,400,000
Tax related for undisputed items before RT	1,600,000
Remaining disputed tax amount before RT	3,000,000
Excess Advance Tax deposited (A)	3,000,000
(Advance tax less, self-assessed tax)	
Deposit of 50% of disputed U/s 116(5)	1,500,000
Undisputed before AR	1,400,000
Undisputed before RT	1,600,000
Total to be paid	4,500,000
Balance to be deposited for RT appeal	**1,500,000**

As per Section 116(6), The company will have option of submitting the bank guarantee for the same amount as mentioned above in place of cash deposit.

Answer No. 3(b):

Following will be the incomings in each of situations for Ms. Sita Gurung with respect to the transactions mentioned above:

Section 43 of Income Tax Act has defined the process and the outcome of the handover of assets between husband, wife or ex-husband and ex-wife. The person handing over the assets shall apply with the concerned Inland Revenue Office, for application of provisions of Section 43. Where the Section 43 is applied, the person who acquires the assets through transfer shall be deemed to have incurred the amount equal to the net expense incurred immediately before the disposal. In light of above Ms. Sita Gurung receiving the building as part of settlement the outgoing shall be Rs. 200 lakhs. Her husband on the other hand will not earn income on this transfer because the incoming for him will be equivalent to the cost incurred.

Section 40 (3) of Act provides for conditions in which an assets or liabilities is said to have been transferred. One of the conditions is related to transfer of assets other than land and building situated in Nepal which is considered to have been transferred immediately before the person becoming non-resident. Section 41 further clarifies that the incomings in this case shall be the market value of the assets. Considering the provisions of the Act, in case of shares, Ms. Gurung is said to have been realized the incomings from shares for Rs. 25 lakhs with outgoing Rs. 20 lakhs.

Section 44 provides for the transfer of property in case of death of a person. It has been mentioned that in case of death, the assets is said to have been transferred at market value, equivalent amount is considered as cost to the person receiving the assets. Ms. Gurung is said to have incurred the outgoings of Rs. 800 lakhs.

When Ms. Gurung returns Nepal and sells the property and shares the incoming and outgoing shall be as follows:

Incomings for land Rs. 260 lakhs Outgoings Rs. 200 lakhs

Incomings for shares Rs. 30 lakhs Outgoings Rs. 25 lakhs

The property which she inherited got acquired by the government and provided the compensation. Section 46 of the Act provides for situation when a property is disposed involuntarily and within one year similar property is acquired and person applies to the Inland Revenue Office for application of this Section then the person need not pay tax at the time of involuntary transfer of assets. Only after the replacement assets is acquired, the gain on sale of assets is computed.

In the given case, Ms. Gurung has purchased the replacement assets within one year, therefore the incoming and cost in this case shall be as follows:

Purchase price of new property	Rs. 700 lakhs
Compensation received	Rs. 690 lakhs
Net expenses for the property immediately before disposal	Rs. 700 lakhs

Incomings = Net expenses for the property immediately before disposal + compensation on disposal – purchase of new property (where compensation is higher than cost of new assets

= 700 lakhs.

Outgoings = Net expenses for the property immediately before disposal + purchase of new property - compensation on disposal (where cost of new assets is higher than compensation on disposal)

= (700 + 700 – 690) lakhs = 710 lakhs

Answer No. 4 (a):

Calculation of taxable income and tax liability of Sunrise General Insurance Ltd for the Income Year 2080/81.

Particulars	Section	Note	Amount (NPR.)
Items to be included in Income			
Net Premium Received	U/s 60(2)(Ka)		848,000,000
Commission on insurance ceded	U/s 60(2)(Ka)		88,800,000
Opening unexpired risk reserve	U/s 60(2)(Kha)(3)		281,000,000
Opening claim outstanding	U/s 60(2)(Kha)(3)		40,020,000
Interest income on Fixed Deposit (Gross)	U/s 7(2)(Chha)		77,000,000
Miscellaneous income	U/s 7(2)(Chha)		45,500,000
Claim received from reinsurance	U/s 60(2)(Ka)		87,500,000
Sale of salvage	U/s 7(2)	(50,500/1.13)	45,000
Total Amount to be Included in Income			1,467,865,000

Less: Deductible Expenses			
Commission on reinsurance accepted	U/s 60(2)(Kha)		19,300,000
Agent commission	U/s 60(2)(Kha)		26,200,000
Management expenses	U/s 13	Prior period expenses not deductible U/s 13	192,870,000
Claim paid during the year	U/s 60(2)(Kha)		193,000,000
Closing claim outstanding	U/s 60(2)(Kha)	115% of closing claim outstanding is allowable	59,800,000
Closing unexpired risk reserve (50% of net premium received)	U/s 60(2)(Kha)		424,000,000
Depreciation	U/s 19		88,000,000
Carried forward loss of FY 2079/80	U/s 20		187,000,000
Total Deductible Expenses			1,190,170,000
Assessable Income			277,695,000
Taxable Income			277,695,000
Tax (@30%)			83,308,500

Answer No. 4(b):

As per Sub Section (1) of Section 106, where a person fails to pay tax on or before the date the tax is payable, the Inland Revenue Department may, by notice in writing served on the concerned office of the Government of Nepal (GoN), order the office to prevent the person from leaving Nepal for a period of 72 hours after the expiry of time limit specified in a notice served for the purpose of paying tax.
Further, as per Section 107(1) and (2), where an entity does not comply with the laws, every person who is an officer of the entity at that time shall be liable for that. Where an entity fails to pay tax on or before the date on which the tax is payable, every person who is an officer of the entity at that time or was such an officer within the previous six months shall be jointly and severally liable every other such for payment of the tax.

As per Section 107(3), above subsections shall not apply in only if the offence is committed by the entity without that person’s knowledge or consent; and where the person has exercised the degree of care, diligence, and skill that a reasonably prudent person would have exercised in comparable circumstances to prevent the commission of the offence.

There is no such case mentioned in the question that satisfied the provision mentioned in Section 107(3) therefore, the action of Inland Revenue Department in not ultra-virus to the provisions of law.

Answer No. 5:

Section 2(dha) of Income Tax Act covers political parties registered with Election Commission to be tax exempt entities. Tax exempt entities receiving following income are exempt from tax.

a. Donations or gift

b. Other contributions directly related to the activities of an exempt organization under Sec 2 (dha), where the contributor does not receive or expect any consideration.

On the basis of above, the income of Hasila Nepali Party is assessed for tax computation.

Calculation of taxable income and tax liabilities

Particulars	**Amount**	**Remarks**
Membership fees received from members	-	Exempt as received as per the objective
Levy received from members	-	Exempt as received as per the objective
Interest received from banks	-	Final withholding - Section 92 (1) (Nga)
Building rent received	350,000	Earning rent income is not as per objective hence taxable
Income from sale of merchandise	550,000	Not as per objective hence taxable
Income from sale of scrap	55,000	Not as per objective hence taxable
Royalty from canteen operator	333,000	Not as per objective hence taxable
Computer donation	-	Exempt as received as per the objective - person donating does not expect any consideration in return
Total Income	**1,288,000**	
Deductions		
Election related expenses	-	Since income is exempt related expense not allowed for deduction
Travelling expenses	-	as above
Refreshment expenses	-	as above
Other office expenses	-	as above
Depreciation of computers	-	as above
Total Deductions	**-**	
Taxable income	**1,288,000**	
Tax liability @25%	322,000	

Answer No. 6:

As per section 63(1) of the act, if a person wants to establish an approved retirement fund, it has to obtain a written and prior permission from Inland Revenue Department (IRD). On receipt of application, department may approve its application on the terms and conditions specified in the rules.

i) As per Rule 20(2) of Income tax rules, following are the conditions applicable for granting the approved status:

Ka) The funds or deposits received by an approved retirement fund should be invested in accepted investments. According to the rule, the accepted investments are Investments in CIT established as per prevailing law, investments in government bonds, investments in banks or investment in finance companies having license from NRB to conduct financial transactions, Investment for consortium financing and Investment in beneficiaries other than its own shareholders.

Ka1) Paid up capital of such entity shall be at least 1 Crore.

Ka2) Number of beneficiaries, workers or employees shall be at least one thousand

Kha) The management of the fund should be done separately from that of the employer, if the fund accepts the retirement contribution from the employer on behalf of the employees. But this provision is not applicable for its employees or workers.

Ga) The contribution amount should be deposited in the fund, within one month in case the expenses are booked during the month of Ashadh or within fifteen days in case the expenses are booked during the months of other than Ashadh.

Gha) The retirement payments to the beneficiaries could be made only under these circumstances: on retirement of employees, on achievement of an age of fifty eight years of the beneficiary, on death or on the occurrence of permanent disability of the beneficiary.

As per Rule 20(3) of Income tax rules, IRD may withdraw the approval if the fund does not function according to the conditions specified. On withdrawn of approval, the fund is converted into an unapproved retirement fund.

ii) As per section 64(2) of the act, income of an approved retirement fund is exempt from income tax. In the calculation of income of a retirement fund, following amounts are not considered:

Ka) The contributions received from the members are not included in the income of the fund.

Kha) The retirement expenses to the members are not included in the expenses of the fund.

Ga) Interest of beneficiary in the retirement fund shall not be fund liability.

iii) If approval of retirement fund is cancelled by IRD, it has to pay income tax @25% on the amounts calculated as follows:

Contributions received by the fund from the day approval is granted to the day of approval being withdrawn plus any other amount that would be included in the income if the approval were not granted minus retirement payments made from the day of the approval being granted to the day of the approval being withdrawn.

Answer No. 7:

i) As per section 95Ka(7), advance tax shall be collected at the customs point at the rate of 5 % for garlic which is imported for business purpose. The value is considered the valuation for the custom purpose. So, advance tax to be paid at customs point is Rs. 54,000 (5% of Rs. 1,080,000).

However, on import of goods on which VAT if applicable advance tax shall be collected @ 1.5%.

ii) As per section 95Ka(7), the advance tax shall be collected at the customs point at the rate of 2.5 % for rice which is imported for business purpose. The value is considered the valuation for the custom purpose. So, advance tax to be paid at customs point is Rs. 25,500 (2.5% of Rs. 1,020,000).

However, on import of goods on which VAT if applicable advance tax shall be collected @ 1.5%.

iii) As per section 95Ka(7), the advance tax shall be collected at the customs point for those transactions which are imported for business purpose. The supplier shall be eligible to import the goods for the business purpose even though it has imported for personal use. It has not granted to import for personal purpose. So, TDS is Rs. 1,125(2.5 % of Rs. 45,000).

iv) No tax shall be withheld in an amount received by natural person for house rent. (Sec 88(1)(5)(Kha)

v) As per section 95Ka(6), the Land Revenue Office shall collect advance tax at the rate of 1.5 % at the time of registration on amount derived from disposal of land. So, advance tax is Rs. 82,500 (1.5 % on gain Rs. 55 lakh).

vi) In a payment for carriage service or rent payment for carriage service, TDS shall be 2.5% as per Sec 88(1)(8). So, TDS is Rs. 8,325 (2.5% on Rs. 333,000). However, withholding tax @ 1.5% shall be deducted on payment made for transport services and providing vehicles on rent by a person registered in VAT.

vii) Under section 88(1), TDS on commission payment is 15 %. So, TDS is Rs. 45,000 (15% on Rs. 300,000 excluding VAT).

Answer No. 8:

Section 2(Bha) (5) of Income Tax Act 2058 has covered a foreign permanent establishment to be an ‘entity’ within the meaning of Act. Section 3 of the Act which specified the person to whom the tax is levied, where a ‘person’ having a taxable income in the year is levied the tax as per the Act. Further, Section 2(KaCha) which defines ‘person’ covers natural person and entity within the meaning of ‘person’. Moreover, as per the meaning of Section 2(Ka Nga), the foreign permanent establishment is considered as ‘resident person’. With all these definitions it is clear that a foreign permanent establishment if has a taxable income in the year is supposed to be paying tax in Nepal. It is clear that a foreign permanent establishment is a taxable entity in Nepal, however the conditions in which any establishment of foreign entity is a taxable in Nepal, we need to ascertain whether the establishment satisfies the definition of permanent establishment. If the establishment satisfies the definition of permanent establishment, such permanent establishment of foreign entity is taxable unit in Nepal. For a foreign entity to have a permanent establishment in Nepal, any of the following conditions is to be met:

a. In case there is a place from where the entity carries on business either wholly or partially.
b. In case there is a place from where the agent of the entity carries on business the agent not being general agent of independent status.
c. In case there is a place where the entity has, is installing or is using main machinery or equipment.
d. In case the entity provides technical, business or consultancy services in one or more places or Nepal for more than 90 days in any twelve months period either continuously or intermittently either through employee or otherwise, or
e. In case the entity is involve in construction, installation or establishment projects for 90 days or more or is involved in supervisory activities of such projects.

Lily Construction should also obtain the Permanent Account Number as per Section 78 of Income Tax Act.

Answer No. 9:

Computation of Taxable Income:

Particulars	**Section**	**Note**	**Amount (Rs.)**
Basic Salary	U/s 8(2)(Ka)	10,20,000 * 60%	612,000.00
Employers Contribution to Provident Fund	U/s 8(2)(Cha)	(612,000*10%)	61,200.00
Gratuity	U/s 8(2)(Cha)	(612,000*8.33%)	51,000.00
Additional Employers Contribution in SSF (1.67% of Basic for 6 month by employer)	U/s 8(2)(Cha)	(612,000*1.67%)*6/12	5,100.00
Allowance	U/s 8(2)(Kha)	10,20,000 * 40%	408,000.00
Medical Allowance	U/s 8(2)(Kha)		33,000.00
Festival Allowance	U/s 8(2)(Kha)		55,000.00
Children Education Allowance	U/s 8(2)(Kha)		90,500.00
Bonus as per Bonus Act	U/s 8(2)(Ka)		350,000.00
Loan Installment Paid by Employer	U/s 8(2) (Chha)		2,20,000.00

Annual performance allowance	U/s 8(2)(Kha)		90,000.00
Insurance Compensation	U/s 31		-
Leave Encashment	U/s 8(2)(Ka)		75,000.00
Total Assessable Income			20,50,800.00
Less: Allowable Contribution in ARF	U/s 63	2	406,560.00
Adjusted Taxable Income			16,44,240.00
Less: Donation to Exempt Entity	U/s 12	3	82,212.00
Taxable Income			15,62,028.00

Computation of Tax Liability of Mr. Nischal Aryal for the Income Year 2080/81 as per Schedule 1 Section 1(1)

Slab	Taxable Amount (Rs)	Rate	Amount
1	5,00,000	0%	0
2nd	2,00,000	10%	2,000
3rd	3,00,000	20%	60,000
4th	5,62,028	30%	168,608.40
	Total Income Tax Payable		230,608.40

Note 1:
As per SSF Act, if the total salary is not bifurcated into basic & DA/allowances, 60% of monthly salary shall be considered as basic & 40% as allowances.

Note 2:
Least of the following shall be allowed U/s 63

i) Actual Contribution	406,560.00
ii) Monetary Limit	500,000.00
iii) 1/3 of Assessable Income	683,600.00
Least of the above	406,560.00

Note 3:
Least of the following shall be allowed U/s 12

i) Actual Donation	90,000.00
ii) Monetary Limit	100,000.00
iii) 5% X Adjusted Taxable Income	82,212.00
Least	82,212.00

Answer No. 10:

Quantification of perquisite/benefits as per the provision of Income Tax Act, 2058 are as follows:

i) As per Sec. 27 (1) (Kha) (1) read together with Rule 13 (1) (Ka), vehicle facility provided to the employees is quantified 0.5% of remuneration provided to the employee if the vehicle is fully or partially used for personal purpose.

Therefore, vehicle facility provided for official purpose shall not be quantified and included in taxable income of employee.

ii) As per Sec. 27 (1) (Kha) (1) read together with Rule 13 (1) (Ka), vehicle facility provided to the employees is quantified 0.5% of remuneration provided to the employee if the vehicle is used fully or partially for personal purpose. Salary being drawn has been interpreted by Income Tax Directive issued by Inland Revenue Department as sum of basic salary and grade drawn by an individual for the income year from the employer providing such facility.

Rs. 475 being 0.5% of basic salary plus grade of Mr. Krishna [(80000+15000)*0.5%)]

iii) As per Sec. 27 (1) (kha) (2) read together with Rule 13 (2) (ka), building facility provided to the employees is quantified at 2% of remuneration provided to the employee for personal purpose, in full or in part.

The amount required to be quantified in inclusion is Rs 34,000 being 2% of Rs. 17,00,000 total annual remuneration.

iv) As per Sec. 27 (1) (gha) the interest paid by the payee in an income year for loan be less than the interest on prevailing market interest rate, the shortfall amount shall be quantified and included in taxable income of employee.

Rs. 48,000 being interest less than market rate. (8%-4% =4% on 12 lakhs)

v) As per Sec. 27 (1) (kha) (2) read together with Rule 13 (2) (kha), building facility provided to other than employees is quantified 25% of amount paid for rent and included in taxable income of employee.

Rs 60,000 (Rs 30,000*8*25%) i.e. 25% of rent paid.

Answer No. 11:

S. N.	Transaction	Taxable In Nepal - Yes or No?	Relevant DTAA Provision
1.	Ministry of Foreign Affairs Nepal paid to a Training Institute in India.	No	Article 7 (1) Business profits The profits of an enterprise of a Contracting State shall be taxable only in that State unless the enterprise carries on business in the other Contracting State through a permanent establishment situated therein. If the enterprise carries on business as aforesaid, the profits of the enterprise may be taxed in the other State but only so much of them as

			is attributable to that permanent establishment.
2.	Everest Bank Ltd, Nepal; a subsidiary of Punjab National Bank, India paid director's fees to its director from India, who visits Nepal only for occasional meetings.	Yes	Article 16 Directors' fees Directors' fees and other similar payments derived by a resident of a Contracting State in his capacity as a member of the Board of Directors of a company which is a resident of the other Contracting State may be taxed in that other State.
3.	Mr. Abdul Khan, an Indian Resident, has a house in Kathmandu and gets rent on a monthly basis.	Yes	Article 6(1) Income from immovable property Income derived by a resident of a Contracting State from immovable property (including income from agriculture or forestry) situated in the other Contracting State may be taxed in that other State.
4.	Mr. Saroj a Nepali Resident has conducted a restaurant in Laxminagar, New Delhi.	No	Article 7(1) Business profits The profits of an enterprise of a Contracting State shall be taxable only in that State unless the enterprise carries 1on business in the other Contracting State through a permanent establishment situated therein. If the enterprise carries on business as aforesaid, the profits of the enterprise may be taxed in the other State but only so much of them as is attributable to that permanent establishment.
5.	The income of Vistara Airlines from the DEL-KTM-DEL route.	No	Article 8(1) Shipping and air transport Profits derived by an enterprise of a Contracting State from the operation of ships or aircraft in international traffic shall be taxable only in that Contracting State.

Answer No. 12:

As per the Code of Ethics of ICAN, a chartered accountant shall not provide tax services that involve assisting in the resolution of tax disputes to an audit client if:

(a) The services involve acting as an advocate for the audit client before a public tribunal or court in the resolution of a tax matter; and

(b) The amounts involved are material to the financial statements on which the firm will express an opinion.

However, this does not preclude the CA from having a continuing advisory role in relation to the matter that is being heard before a public tribunal or court, for example:

● Responding to specific requests for information.

● Providing factual accounts or testimony about the work performed.

● Assisting the client in analyzing the tax issues related to the matter.

In this case therefore, the firm cannot provide the services to the extent where the CA has to present in in the Tribunal where hearing are public and he also provides the assurance services to the same client. However, he can provide the advisory services mentioned above.

Answer No. 13:

Section 16 Kha of VAT Act, 2052 allows for the VAT credit on items that are lost due to fire, theft, accident, breakage or sabotage. Similarly, Rule 39Ka of VAT Rules provides for the procedure for claiming the credit in case the goods are lost due to these circumstances.

In given case, it shows that surveyors reported Rs. 18 lakhs worth of stock was lost, and compensation was provided against the loss but they could not trace the returned stocks worth of Rs. 8 lakhs. Considering the returned stocks to the supplier, the actual stock lost was Rs. 10 lakhs.

Further the rule 39 states that the taxpayer should apply to concerned tax office within 30 days of the incidence for the adjustment of the credit claimed for the items that were lost on any of these circumstances. Tax office after necessary checking satisfied about the loss, it will approve the claim of credit in the lost items. For the items that were insured and compensation received, the tax payer itself can adjust the stock and the VAT. Luxurious Furniture and Fittings received the compensation against the lost items, so, it can adjust the stock and VAT.

In the second case, there is short fall of stock. As per Rule 40, if during the inspection by the Tax Officer, if the items are not there in the stock i.e. if there is shortage of the goods, then the shortfall is considered as sold at the prevailing market price. In this case, the stock worth Rs. 8 lakhs will be considered as sold in the normal situation. If the entity has maintained the correct record of the goods return then it can justify the difference. As per the defined procedure, on such goods return case, it should reverse the VAT credit in the books and the tax return; and as and when the goods are again supplied it should claim the VAT credit.

It can be expected that while investigating the loss due to fire, the Tax Officer must have completed the full verification of the stock, if Luxurious Furniture and Fittings is not able to provide the proof of stock transfer, then Tax Officer can treat the items as sold, and can demand the tax along with fees & penalty u/s 29 to be deposited on the coming months tax return or immediately as directed by the Tax Officer.

Answer No. 14:

Statement of VAT Receivable / Payable for the month of Jestha 2080.

VAT Payable	Amount	VAT	Total	Remarks
Sale of service - export	1,548,000	-		Export attracts 0% VAT
Sale of service - local	5,550,000	721,500		Local sale attracts full VAT
Sale proceed of old motorbike	17,699	2,301		VAT is applicable on scrap proceed
Write off of software	22,000	2,860		VAT is applicable on write off if it is not informed to IRD

Total VAT Payable			726,661	
Less: VAT Receivables				
Opening VAT Receivable			8,500	
Purchase of wall painting from an artist	50,000	-		Painting and artwork is an exempt item so no VAT
Purchase of Gold coin	55,000	-		Gold coin is exempt from VAT
Purchase of iPad	100,000	-		VAT credit on gift item is not allowed
Purchase of electric vehicle	3,030,000	157,560		40% credit allowed for vehicle - Rule 41
Purchase of service from abroad	133,000	17,290	174,850	Reverse VAT credit is allowed. Assuming that it is paid in the same month.
Total VAT Receivable			183,350	
Net VAT payable on the transaction			**543,311**	

Answer No. 15:

Generally, VAT is collected and paid by the seller of goods. However, in some cases Act has cast responsibility upon the purchaser of goods to pay VAT. This responsibility of paying VAT on purchaser is termed as 'Reverse Charge of VAT'. Section 8(2) and 8(3) of Value Added Tax Act, 2052 has provided as follows:

i) VAT for Service Received from Foreign Party:
As per Section 8(2) of Value Added Tax Act, 2052, any person whether registered or not in Nepal receiving services from a person who is not registered and is outside Nepal shall have to assess and collect tax at the taxable value at the time of payment in accordance with this Act and the Rules framed under this Act.

ii) VAT for Obtaining Vehicle on rent or Transport Services:
As per Section 8 (2Ka) of Value Added Tax Act, 2052, Any registered or un-registered person obtaining transport vehicle on rent or transport service from an un-registered person shall assess and recover tax on the taxable amount in accordance with this act or rules framed under this act at the time of payment or acquisition of service, whichever occurs earlier.

iii) VAT on Construction:
Section 8(3) of Value Added Tax Act, 2052, mention that if a construction of commercial purpose building or apartment or shopping complex or similar other structure as specified by the Department, of which value is more than Five Million Rupees, has been made from a person who is not registered, it shall be deemed as it has been constructed from registered person and shall deposit the tax. In case tax is not deposited, it shall be assessed and collected from the owner of such structure.

Zero Rate Tax means VAT is applicable at zero rates. In these cases, input tax credit is available to the person. Schedule 2 of the Value Added Tax Act, 2052 has provided zero rated VAT items as follows:

1. Export of goods from Nepal
   - (Ka) goods exported outside Nepal; or,
   - (Kha) goods shipped for use as stores on an international flight to an eventual destination outside Nepal; or,
   - (Ga) goods put on board an international flight of which destination is outside Nepal for retail sale or supply or consumption.
2. Export of services
   - (Ka) A supply of services by a person resident in Nepal to a person outside Nepal and having no business establishment, agent, or legal representative acting on in Nepal
   - (Kha) A supply of goods or services by a person who is residing and is registered in Nepal to a person who is residing outside Nepal
3. Goods or services imported by a person or mission enjoying diplomatic facility and a person serving in a diplomatic mission enjoying tariff facility, on the recommendation of the Ministry of Foreign Affairs, Government of Nepal.
4. If any previous treaty or agreement provides for the sales tax exemption on imports, and local purchase is made from registered taxpayers, on the recommendation of the concerned project, the facility of zero rate shall be provided on such supplies, so long as such treaty or agreement is in effect.
5. Raw materials to be sold to and goods manufactured by any industries established pursuant to the laws in force and operated in the special economic zone.
6. If any machinery, equipment, tools and their spare parts, penstock pipes or iron sheets used in making thereof required for hydropower projects are produced by any native industry and are to be supplied by that industry, the facility of zero rate shall be provided to that industry on that transaction, on the recommendation of the Alternative Energy Promotion Centre, in the case of a project that is operated with the approval of that center, and on the recommendation of the Electricity Development Department, in the case of one other than that operated with the approval of the Alternative Energy Promotion Centre and in accordance with the procedures specified by the Department.
7. If paintings, handicrafts, carving and similar other handicrafts produced a cottage and small scale industry within Nepal are exported through an approved export trading house of Nepal, the value added tax paid on the raw materials used in the manufacture of such goods shall be refunded after fulfilling the procedures specified by the Inland Revenue Department.
8. The value added tax paid on the import or local purchase of scooters used by persons with disabilities shall, if such scooters are registered in their name in the Office of Transport Management, be refunded on the recommendation of the Women, Children and Social Welfare or District Administration Office, and in accordance with the procedures as specified by the

Department of Inland Revenue. If such goods are sold to any persons other than the persons with disabilities, the refunded value added tax shall be recovered.

9. Zero Rate Vat Facility for domestic Industries supplying directly or through contractor of projects the Machinery, tools and Construction Equipment included in approved master list of the project operated by bilateral or multilateral agreement after obtaining tax exemption from ministry of Finance, Government of Nepal.
10. On the recommendation of Department of Forest and Environment, deep cycle lead acid battery manufactured by domestic industry that is used in electric vehicles which is included under sub heading 8507.20.00.

Answer No. 16:

Note: Since both the businesses are of the same individual, the amount of VAT obligation shall be computed considering both the firms.

Computation of VAT on Sales

Sales item	**VAT amount**	**Note**
Sales from M/s Import Trading	26,00,000	20,000,000 X 13%
Sales from M/s Hari Imports	6,52,080	Note 'v'
Total Output VAT	32,52,080	

Computation of Input VAT credit

Purchase item	**VAT amount**	**Note**
Import from M/s Import Trading	39,50,050	Note 'i'
Electricity expense	-	VAT exempt
Car for admin purpose	3,12,000,	40% of 13% of Rs. 6,000,000
Petrol for vehicle	-	No credit
Petrol for generator	5,850	45000*13%
Invoice dated 2079.9.15 without VAT credit previously	65,000	Up to one year
Invoice dated 2079.4.4 without VAT credit previously	-	More than one year: no credit
VAT on service received from Germany	-	Two solutions exist. If the examinee assumes that payment of VAT is made before filing return, then he must claim credit. If he assumes that payment of VAT is made only after filing return, he cannot claim credit in his solution

VAT on construction services	45,500	As the building is used in VAT attractive business, full credit on cost of Rs. 400,000(7l-4l
Import from M/s Hari Imports	5,92,800	Note 'iv'
Total Input VAT	49,71,200	

VAT obligation
Output VAT – Input VAT = 17,19,120 (receivable VAT)
Though there is receivable VAT of Rs. 17,19,120; the firm shall pay reverse VAT of Rs. 3,90,000 U/s 8(2) on import of Service. The reverse VAT u/s 8 (3) becomes payable when the firm books Capital WIP, which is ideally during the month of Mangsir, as such, the total reverse VAT payable is Rs. 4,81,000 (. 390,000 +91000).

i) Import from M/s Import Trading

Particulars	Con 1	Con 2	Con 3	Total
CIF- Birgunj Value	5,000,000	6,500,000	12,000,000	
Rate of Import duty	20%	25%	10%	
Customs duty	1,000,000	1,625,000	1,200,000	
Taxable value for excise duty	6,000,000	8,125,000	13,200,000	
Rate of excise duty	18%	0	15%	
Excise duty	1,080,000	0	1,980,000	
Taxable value for VAT purpose	7,080,000	8,125,000	15,180,000	
VAT	**920,400**	**1,056,250**	**1,973,400**	**3,950,050**

ii) In case of construction of building, as per IRD circular, the total cost of the building shall be considered while determining the threshold of Rs. 50 lakhs in order to apply Sec. 8 (3). As of Mangsir 2080, the total cost is Rs. 5,200,000 that is above the threshold of Rs. 50 lakhs, as such, reverse VAT is applicable on the VAT-attractive cost element on which there is no proper VAT invoice. As per question, total of such cost is Rs. 700,000. The reverse VAT payable at the time recording Capital WIP or capitalization of asset is Rs. 91,000.

iii) As the service is received from Germany during the month, the firm must pay reverse VAT of Rs. 390,000 u/s 8 (2) on the cost within 25th of Poush. As per Sec. 8 (2), VAT must be collected at the time that is earlier of payment or receipt of service.

iv) Computation of VAT payment on import by M/s Hari Imports

Particulars	**Amount**
Invoice value	35,00,000
Add: Transport cost (higher of amount in airway bill or cost declared by importer)	250,000

Other associated cost	250,000
Customs Value	40,00,000
Import duty @ 14%	560,000
Taxable value for VAT purpose	45,60,000
VAT @13%	5,92,800

v) Sales from M/s Hari Imports

Particulars	**Amount**
Cost	45,60,000
Sales with 10% margin	50,16,000
VAT on sales	*6,52,080*

Answer No. 17(a):

Rule 30(1) of Excise Rules 2059 provides that excise sticker shall be fixed while storing the liquor and tobacco product that are imported or manufactured in Nepal. Such stickers can be brought from tax office. Rule 30(5) provides that tickets made available by tax office to the Company is damaged at the time of use, then such tickets can be replaced by the Tax office after physical inspection by the Excise officer. Excise Directive 2068 specifies below procedure for destroying of damaged excise tickets:

- If a Company files application to the Excise Office for deduction of damaged or destroyed excise stickers, then Excise Office can allow such deduction after due investigation. Excise Office has to keep sample of damaged/destroyed stickers.
- Excise office has to issue equal amount of new excise tickets to the Company that is damaged or destroyed.
- Such damaged/destroyed excise tickets shall be destroyed under affidavit of respective excise officer, representative of respective district office, representative of financial comptroller office, Excise Officer and Representative of the Company every 3 months.

Answer No. 17(b):

i) Section 10Gha of Excise act, 2058 provisions the power of the excise officer to assess excise duty. As per provisions, the excise officer can excises the power if the following conditions exist:

(a) if excise duty return is not submitted within the time limit,

(b) if incomplete or erroneous excise duty return is submitted,

(c) if a false excise duty return is submitted,

(d) if there are grounds to believe that the amount of excise duty is shown less or is not correct,

(e) if there are grounds and reasons to believe that the selling price is under-invoiced, which requires reassessment of the price or assessment of an additional price pursuant to sub-section (4) of Section 7,

(f) if manufacturing limit is not met where such limit of manufacture of goods or service subject to excise duty in accordance with or under this Act, is specified

(g) if the volume of alcohol in released liquor or alcohol based substance differs by more than one percent,

(h) if excise duty is evaded,

(i) if any person carries out transaction of goods subject to excise duty without obtaining the license.

j) if the excise stickers are more or less than books of accounts.

As given situation, the conditions of (b), (c) and (d) are existed. So, the excise officer can assess the excise amount under this situation. For penalty under section 16 relevant for non-compliance with section 10Gha, has not been specified. However, in the given case as excise duty is not recovered or is less recovered so, the penalty U/s 16(4)(Ta) can be made by the excise officer.

ii) If the management realized the stock of shortage, excise duty, delayed fee will be applicable.

Excise duty is Rs. 12 per liter of shortage 500 liters, so excise duty will be Rs. 6,000, in addition delayed fee 0.05 % per day on the excise duty to be paid. The delayed fee shall be charged from 26, Mansir, 2080 to the date of short deposit.

Answer No. 18(a):
Rules 25Ka of excise rules allow usage of spirit or ethanol for other purposes with certain guidelines:

Rule 25Ka(1) – In case the licensee intends to convert spirit into denatured spirit for other purposes, the same shall be done mixing at least 0.02% of pyridine or colchicine or methyl alcohol in rectified or herds spirit. IRD may direct the licensee to color the denatured spirit as per the necessity. IRD shall permit the conversion of rectified spirit to denatured spirit such that the recovery of excise duty is not reduced.

Rule 25Ka(2) – The licensee shall sell anhydrous ethanol produced for mixing with petrol to Nepal Oil Corporation or entity approved by Government of Nepal. Approval of IRD is must while selling anhydrous ethanol from enterprises. IRD shall permit such sales only after ensuring that at least 2% of petrol is mixed with such anhydrous ethanol.

Rule 25Ka(3) – In case of raw materials such as molasses, rectified spirit, ENA, malt spirit and import, production and sales of denatured spirit, the department may prescribe and control.

Answer No. 18(b):

Calculation of Shortages of the quantity:

	Stock as per Record	Stock as per Physical Verification	Difference	% Difference
Liquor	80,000	79,000	1,000	1.25%
Beer bottles after pasteurization, packaging and storing	Stock as per Record	Stock as per Physical Verification	Difference	% Difference
	100,000	97,000	3,000	3.00%

Rules 23 and 23Ka stipulate about the shortages in liquor and beer. According to Rule 23, liquor reduced due to vaporization, pilferage, in course of bottling, etc. can be exempted up to 1%. Likewise, Rule 23Ka stipulates that the beer manufacturer can get exemption for reduction of beer up to 2% during pasteurization, packaging or storing in the Godown. Any excess loss beyond the ceilings shall be taxed.

Accordingly, the losses shall be taxed for excess of the ceilings which are found in all the given cases.

Answer No. 19(a):

An industry operating a bonded warehouse is allowed to import the goods on bank guarantee facility. A licensed industry need not require to pay the duty upfront in cash. When the imported goods are exported through banking channel by the licensed industry, the bank guarantee provided in favor of Customs Office can be released if it met all the conditions set out there. Rule 9 requires the industry to renew the bonded warehouse license before the commencement of the new financial year, though it allows for renewal subsequently with additional fees.

For the not renewed period, the industry will not be provided with the bonded warehouse facility. In this case, Comfy Shoe did not renew the license on due date and the import has taken place in before the license was renewed, therefore, the demand for payment of customs duty by the customs officer is valid as per the provisions of the law.

In the second instance, the import has taken place on 5th Kartik 2079 and the related export has taken place on 5th Poush 2080. Two aspects needs to be seen in this case, first is the value addition and second is time gap between the import and the export.

The law prescribes for at least 10 percent value addition on the imported goods based on the value determined by Customs. In this case, the value addition in terms of the customs value is 25%, therefore the first test is met. In second test, there is more than 11 months' time gap between import and export. The Rules allows for 6 additional months if the industry applies with valid reason for not being able to export within 11 months' time. The export has not happened within 11 months and M/s Comfy Shoe has not applied for extension of timeline, therefore this condition is not met.

Answer No. 19(b):

Calculation of all duties and taxes payable to the customs office.

Particulars	FCY
Value of the car at the time of import	25,000
Depreciation allowed:	
Before import the car was in foreign for 3 years. The maximum period for depreciation allowed is 5 years minus 3 years =2 years only as per Schedule 1 Section 9(4) of Finance Act, 2080	
Depreciation for 1st year import @ 10%	2,500
Depreciated balance for 2nd year	22,500
Depreciation for 2nd year import @ 10%	2,250
Value for custom duty	20,250
Value for custom duty in Nepali currency (20,250*129)	2,612,250
Calculation of duty and taxes payable	
Custom Valuation	2,612,250
Applicable custom rate (80 %-60% of 80%)	32%
60 percent of applicable rate is exempted as per Schedule 1 Section 13(1) of Finance Act, 2080 in this situation	
Custom duty	835,920
Less: 1% paid amount	27,500
Net custom duty payable	808,420
Excise duty (60 % of Value plus custom duty)	**2,068,902**
Custom service fee	500
VAT @ 13% (5,517,572*13%)	717,284
Total duty and taxes payable as per above calculation	3,595,106

Answer No. 20(a):

Computation of Custom Duty payable on consignment:

Particulars	Amount
Price of items	550,000
Insurance	10,500
Sea Freight upto Kolkata	60,000
Transportation from Kolkata to Kakarbhitta	33,000
Total Transaction Value	653,500
Rate of Custom Duty	25%
Amount of Custom Duty	163,375

Calculation of demurrage on the consignment:

Date of entry in custom	15th Ashwin 2080
Date of clearance	30th Ashwin 2080
Total days	16 days
Exempt days	7 days

Demurrage applicable days	9 days
Applicable rate	0.40 per k.g. per day - Other than TIA Custom
Total weight	3,000 k.g.
Total demurrage to be paid	=0.4*3000*9 = 10,800

Note:

- Volume discount if not given on the invoice, it cannot be considered for valuation purpose.
- Letter of Credit charges cannot be considered for valuation purpose.
- Transportation cost beyond custom point cannot be considered for valuation purpose.

Answer No. 20(b):

Determination of Base Date for Customs Valuation

As per Section 8, the duty on any goods to be exported or imported shall be determined according to the tariff (rate of duty) prevailing on the date of clearance of such goods. So, act of the Customs Officer of assessing the Custom Duty on 20 Jestha 2080 is correct. Customs Duty should be levied on the basis of Customs Duty Rate and USD exchange rate prevalent on the 20 Jestha 2080, i.e. date of clearance of such goods.

Determination of Transaction Value for Customs Valuation

Section 13 of the Customs Act, 2064 provides for the process to be followed for determination of the transaction value upon which Customs Duty is to be levied. It clearly states that transaction value will be determined on the basis of documents submitted by the importer. The Customs Act has given power to determine the transaction value on the basis of similar goods only if the Customs Officer has reasonable doubt that the transaction value declared by the importer is not correct. Here, act of Customs Officer of determining transaction value on the basis of import of similar goods by another importer may not be correct. Hence, act of the Customs Officer is not correct.

Recourse to Importer

As per Sub Section (1) of Section 61, a person who is not satisfied with any decision or order made by the Customs Officer pursuant to Section 13 may, for the review of such decision or order, file an application, as prescribed, to the valuation review committee formed pursuant to sub-section (2) no later than thirty days after the date of such decision or order.

The Valuation Review Committee shall, while making review pursuant to this Section, inquire into whether the customs valuation determined by the Customs Officer pursuant to Section 13 is accurate or not and may approve or void the valuation determined by the Customs Officer or make valuation of such goods pursuant to this Act or order Customs Officer for revaluation. The Valuation Review Committee shall also assign clear reasons and bases while so approving, voiding valuation or making valuation or ordering for revaluation.

As per Sub Section (1) of Section 62, a person who is not satisfied with the customs duty determined by the Customs Officer or other employee under this Act or with any order or punishment or decision issued or made by customs officer, except any decision or order referred to in Section 13, or with any decision made by the valuation review committee formed pursuant to Section 61 may make an appeal to the Revenue Tribunal within thirty five days after the date of the determination of such customs duty or the imposition of punishment or the making of decision.

Determination of Customs Duty Payable by the Importer

Particulars		**Amount (Rs.)**
FOB price of Machine	USD 130,000 x 111 Rs.	14,430,000
Total Transaction Value		14,430,000
Customs Duty @ 25%	Customs Duty on the date of clearance	3,607,500

EXAM TIPS TO THE STUDENT:

1. Update yourself with the latest amendment made by Finance Act,2080 and recent changes in respective Rules
2. Don’t focus only on the topic, try to cover the entire syllabus
3. Don’t focus on the section. If you are not confident in quoting section then don’t write it. Instead write the clear provision.
4. Don’t ignore the theory portion
5. Built your confidence by practicing more questions that were asked in previous examinations.

Paper 7 - Advanced Cost and Management Accounting

Section 1: Questions:

Chapter: Marginal Costing and Decision-Making Problems

Question No. 1:

B Ltd. is a company that has, in stock, materials of type XY that cost Rs.75,000, but that are now obsolete and have a scrap value of only Rs.21,000. Other than selling the material for scrap, there are only two alternative uses for them.

Alternative 1 – Converting the obsolete materials into a specialized product, which would require the following additional work and materials:

Material A	600 units
Material B	1,000 units
Direct Labor:	
5,000 hours unskilled	
5,000 hours semi-skilled	
5,000 hours highly skilled	
Extra selling and delivery expenses	Rs.27,000
Extra advertising	Rs.18,000

The conversion would produce 900 units of saleable product and these could be sold for Rs. 300 per unit.

Material A is already in stock and is widely used within the firm. Although present stocks together with orders already planned, will be sufficient to facilitate normal activity and extra material used by adopting this alternative will necessitate such materials being replaced immediately. Material B is also in stock, but is unlikely that any additional supplies can be obtained for some considerable time, because of an industrial dispute. At the present time material B is normally used in the production of product Z, which sells at Rs.390 per unit and incurs total variable cost (excluding Material B) of Rs.210 per unit. Each unit of product Z uses four units of Material B. The details of Materials A and B are as follows:

	Material A (Rs.)	Material B (Rs.)
Acquisition cost at the time of purchase	100 per unit	Rs.10 per unit
Net realizable value per unit	85 per unit	Rs.18
Replacement cost	90 per unit	-

Alternative 2 – Adopting the obsolete materials for use as a substitute for a sub-assembly that is regularly used within the firm. Details of the extra work and materials required are as follows:

Material C	1,000 units
Direct Labour:	
4,000 hours unskilled	
1,000 hours semi-skilled	
4,000 hours highly skilled	

1,200 units of the sub-assembly are regularly used per quarter at a cost of Rs. 900 per unit. The adaptation of material XY would reduce the quantity of the sub-assembly purchased from outside the firm to 900 units for the next quarter only. However, since the volume purchased would be reduced, some discount would be lost and the price of those purchased from outside would increase to Rs.1,050 per unit for that quarter.

Material C is not available externally though 1,000 units required would be available from stocks, it would be produced as extra production. The standard cost per unit of Material C would be as follows:

	Rs.
Direct labour, 6-hour unskilled labour	18
Raw materials	13
Variable overhead: 6 hours at Re.1	06
Fixed overhead: 6 hours at Rs.3	18
	55

The wage rate and overhead recover rates for B Ltd. are:

Variable overhead	Re.1 per direct labour hour
Fixed overhead	Re.2 per direct labour hour
Unskilled labour	Re.3 per direct labour hour
Semi-skilled labour	Re.4 per direct labour hour
Highly skilled labour	Re.5 per direct labour hour

The unskilled labour is employed on a casual basis and sufficient labour can be acquired to exactly meet the production requirements. Semi-skilled labour is part of the permanent labour force, but the company has temporary excess supply of this type of labour at the present time. Highly skilled labour is in short supply and cannot be increased significantly in the short-term, this labour is presently engaged in meeting the demand for product L, which requires 4 hours of highly skilled labour. The contribution from the sale of one unit of product L is Rs. 24. Given the above information, you are required to present cost information advising whether the stocks of Material XY should be sold, converted into a specialized product (Alternative 1)) or adopted for use as a substitute for a sub-assembly (Alternative 2).

Question No. 2:

Entertain U Ltd. leases an air-conditioned theatre to stage plays on weekend evenings. One play is staged per evening. The following are the seating arrangements:

VIP rows, the first 3 rows of 30 seats per row, are priced at Rs.320 per seat. Middle level, the next 18 rows of 20 seats per row, are priced at Rs.220 per seat. Last level, 6 rows of 30 seats per row, are priced at Rs.120 per seat.

For each evening a drama troupe must be hired at Rs.71,000, rent has to be paid for the theatre at Rs.14,000 per evening and air conditioning and other state arrangements charges work out to Rs. 7,400 per evening. Every time a play is staged, the drama troupe's friends and guests occupy the first row of the VIP class, free or charged, by virtue of passes granted to these guests. the troupe ensures that 50% of the remaining seats of the VIP class and 50% of the seats of the other two classes are sold to outsiders in advance and the money is passed on to Entertain U. The troupe also finds for every evening, a sponsor who puts up his advertisements banner near the stage and pays Entertain U a sum of Rs. 9,000 per evening. Entertain U supplies snacks during interval free of charge to all the guests in the hall, including the VIP free guests. The snacks cost Entertain U Rs. 20 per person. Entertain U sells the remaining tickets and observes that for every one seat demanded from the last level, there are 3 seats demanded from the middle level and 1 seat demanded from the VIP level. You may assume that in case any level is filled, the visitor buys the next higher or lower level, subject to availability.

(i) You are required to calculate the number of seats that Entertain U has to sell in order to break-even and give the category wise total seat occupancy at BEP.

(ii) Instead of the given pattern of demand, if Entertain U finds demand for VIP, Middle and Last level is in the ratio 2:2:5, how many seats each category will Entertain U have to sell in order to break-even ?

Question No. 3:

AXE Ltd. manufactures four products A, B, C and D. The following details are available for a production period:

	A	**B**	**C**	**D**
Selling price	100	109	121	124
Material cost	40	42	46	40
Labour cost				
Assembly Dept. @ Rs. 10 per hour	15	20	15	20
Machine Dept. @ Rs. 12 per hour	18	24	36	30
Variable overheads @ Rs. 4 per labour hour in assembly dept.	6	8	6	8
Maximum external demand (units)	40,000	55,000	36,000	30,000

Total fixed cost is dependent on the output level and is tabulated below at different levels of output:

Production units (any combination of one or more of any A, B, C or D)	**Total fixed cost** (Rs.)
Zero to 1,00,000 units	8,43,000
1,00,001 to 1,50,000 units	12,50,000
1,50,001 to 2,00,000 units	16,00,000

Production facilities can be interchangeably used among the products.

Labour availability in the assembly department is limited to 2,20,000 hours for the production period. A local firm has offered to make any quantity of any of the products on a sub-contract basis at the following rates:

	A	B	C	D
Sub-contract Price (Rs. /unit)	85	95	101	100

(i) Advise the management on how many units of each product are to be manufactured or subcontracted to fulfill maximum market demand. What would be the corresponding profits?

(ii) What is the minimum number of units to be produced to achieve break-even point?

(iii) What would you advise as the best strategy to maximize profits if assembly labour is not a limiting factor and if there is no compulsion to fulfill market demand?

(Only relevant figures need to be discussed. A detailed profitability statement is not required).

Chapter: Standard Costing and Variance Analysis

Question No. 4:

The budget and actual operating data for 2010-11 pertaining to 4 products in a store are given below:

	Budgeted data for 2010-11			Actual operating results in 2010-11		
Product	Gallons	Selling price per gallon)	Variable costs (Rs. per gallon)	Gallons	Selling price (Rs. per gallon)	Variable costs (Rs. per gallon)
V	2,50,000	1.2	0.5	1,80,000	1.00	0.45
C	3,00,000	1.5	0.6	2,70,000	1.35	0.50
S	2,00,000	1.8	0.7	3,30,000	2.00	0.75
A	50,000	2.5	1.00	1,80,000	3.00	1.20

You are required to compute for the individual products and in total:

(i) the sales margin price variance

(ii) the sales margin mix variance and

(iii) the sales margin volume variance

(iv)

Question No. 5:

RST Ltd. has provided the following summarized results for two years:

	Year ended (Rs. in lakhs)	
	31-03-2013	**31-3-2014**
Sales	3,000	3,277.50
Material	2,000	2,357.50
Variable overheads	500	525.00
Fixed overheads	300	367.50
Profit	200	27.50

During the year ended 31-3-2014 sale price has increased by 15% whereas material and overhead prices have increased by 15% and 5% respectively. You are required to analyse the variances of revenue and each element of cost over the year in order to bring out the reasons for the change in profit. Present a profit reconciliation statement starting from profits in 2012-13 showing the factors responsible for the change in profits in 2013-14.

Chapter: Budget and Budgetary Control

Question No. 6:

Prepare a Cash Budget for the three months ending on 30th June, 2019 from the information given below:

(i)

Month	Sales (Rs.)	Materials (Rs.)	Wages (Rs.)	Overheads (Rs.)
February	14,000	9,600	3,000	1,700
March	15,000	9,000	3,000	1,900
April	16,000	9,200	3,200	2,000
May	17,000	10,000	3,600	2,200
June	18,000	10,400	4,000	2,300

(ii) Credit terms are:

Sales: 10% sales are on cash, 50% of the credit sales are collected in the next month and the balance in the following month.

Creditors - Materials 2 months

- Wages ¼ month
- Overheads ½ month

(iii) Cash and Bank balance on 1st April, 2019 is expected to be Rs.6,000.

(iv) Other relevant information are:

a. Plant and Machinery will be installed in February, 2019 at a cost of Rs.96,000. The monthly installments of Rs.2,000 is payable from April onwards.
b. Dividend @ 5% on Preference Share Capital of Rs. 2,00,000 will be paid on 1st June.
c. Advance to be received for sale of vehicles Rs.9,000 in June.
d. Dividends from investments amounting to Rs.1,000 are expected to be received in June.
e. Income tax (advance) to be paid in June is Rs. 2,000.

Chapter: Activity Based Costing

Question No. 7:

XYZ. Limited makes three main products, using broadly the same production methods and equipment for each. A conventional product costing system is used at present, although

Activity Based Costing (ABC) system is being considered. Details of the three products, for a typical period are:

	Labour Hours per Unit	Machine Hours per unit	Material (Rs. per unit)	Volumes (Units)
Product X	1 ½	3 ½	25	3,500
Product Y	½	2	15	2,250
Product Z	2	5	30	6,000

Direct labour costs are Rs.8 per hour and production overheads are absorbed on a machine hour basis. The rate for the period is Rs.18 per machine hour.

Further analysis shows that the total of production overheads can be divided as follows

	%
Costs relating to set-ups	30
Costs relating to machinery	25
Costs relating to materials handling	22
Costs relating to inspection	23
Total production overhead	100

The following activity volumes are associated with the product line for the period as a whole.

	Number of Set-ups	Number of movements of materials	Number of Inspections
Product X	65	15	150
Product Y	110	26	190
Product Z	485	79	570
	660	120	910

You are required:

a. To calculate the cost per unit for each product using conventional methods.
b. To calculate the cost per unit for each product using ABC principles.

Chapter: Costing of Service Sector

Question No. 8:

Flyway Ltd. has hired an aircraft to specially operate between cities A and B. All the seats are economy class.

The following information is available:

Seating capacity of the aircraft	:	260 passengers
Average number of passengers per flight	:	240 passengers

Average one-way fare from A to B	:	Rs. 5,000 per passenger
Fuel costs per flight from A to B	:	Rs. 90,000
Food cost (A to B sector) (no charge to passenger)	:	Rs. 300 per passenger
Commission to travel agents (All tickets are through agents)	:	10% of the fare
Annual lease costs allocated to each flight	:	Rs. 2,00,000
Ground services, baggage handling/checking in service costs per flight A to B	:	Rs. 40,000
Flight crew salaries per flight A to B	:	Rs. 48,000

There is an offer from another airlines operator, Haltgo Ltd. for a stop-over at destination D, which is on the way from A to B. Due to this, the flight will operate from A to D, then from D to B.

The following terms are considered for the stop-over:

50 seats from D to B will be booked by Haltgo at Rs. 2,700 per ticket, whether or not Haltgo is able to sell them to its customers. No agents' commission is payable on these tickets. However, Snacks must be provided to these passengers also by Flyway Ltd. at no further charge to Haltgo or the passengers.

A maximum of 60 tickets can be sold by Flyway's travel agents for the A to D sector at a fare of Rs. 3,000 per passenger.

Since the stop-over wastes more time, 25 of Flyway's original passengers in the A to B sector will voluntarily drop out in favour of other airlines offering direct flights between A and B.

Due to the stop-over, fuel costs will increase from Rs. 90,000 to Rs. 1,35,000. Additional airport landing/baggage handling charges of Rs. 19,000 per stop- over will have to be incurred by Flyway Ltd.

Flyway Ltd. will have to serve snacks to all the passengers in the D to B sector at no charge to passengers. Each snack will cost Flyway Rs. 200. This will be in addition to the original food at Rs. 300 served in the A to D sector.

You may assume that fuel costs are not affected by the actual number of passengers in the flight, ignore non-financial considerations, additional wear and tear to aircraft due to extra landing/take-off.

Without considering Haltgo's offer,

(i) What is the profit earned by Flyway Ltd. per flight from A to B?

(ii) What is the Break-even number of passengers for each flight from A to B?

Considering the effects of Haltgo's offer,

Evaluate whether Flyway should accept the offer

Chapter: Pricing Strategies

Question No. 9:

Nepa Metals Manufactures an alloy product 'Incop' by using iron and Copper. The metals pass through two plants, X and Y. The company gives you the following details for the manufacture of one unit of Incop:

Materials	Iron: 10 kgs @ Rs. 5 per kg.
	Cooper: 5 kg @ Rs. 8 per kg.
Wages	3 hours @ Rs. 15 per hour in Plant X
	5 hours @ Rs. 12 per hour in Plant Y
Overhead recovery	On the basis of direct labour hours
Fixed overhead	Rs. 8 per hour in Plant X
	Rs. 5 per hour in Plant Y
Variable overhead	Rs. 8 per hour in Plant X
	Rs. 5 per hour in Plant Y
Selling overhead :	(fully variable) – Rs. 20 per unit

(i) Find out the minimum price to be fixed for the alloy, when the alloy is new to the market. Briefly explain this pricing strategy.

(ii) After the alloy is well established in the market. What should be the minimum selling price? Why?

Question No. 10:

A large business consultancy firm is organized in to several divisions. One of the divisions is the Information Technology (IT) division which provides consultancy services to its clients as well as to the other divisions of the firm. The consultants in the IT divisions always work in a team of three professional consultants on each day of consulting assignment. The external clients are charged a fee at the rate of Rs. 4,500 for each consulting day. The fee represents the cost plus 150% profit mark up. The break-up of cost involved in the consultancy fee is estimated at 80% as being variable and the balance is fixed.

The textiles division of the consultancy firm which has undertaken a big assignment requires the services of two teams of IT consultants to work five days in a week for a period of 48 weeks. While the director of the textiles division intends to negotiate the transfer price for the consultancy work, the director of IT division proposes to charge the textiles division at Rs. 4,500 per consulting day.

In respect of the consulting work of the textiles division, IT division will be able to reduce the variable costs by Rs. 200 per consulting day. This is possible in all cases of internal consultations because of the use of specialized equipment.

You are required to explain the implications and set transfer prices per consulting day at which the IT division can provide consultancy services to the textiles division such that the profit of the business consultancy firm as a whole is maximized in each of the following scenarios:

(i) Every team of the IT division is fully engaged during the 48 week period in providing consultancy services to external clients and that the IT division has no spare capacity of consultancy teams to take up the textiles division assignment.

(ii) IT division will be able to spare only one team of consultants to provide services to the textiles division during the 48 week period and all other teams are fully engaged in providing services to external clients.

(iii) A new external client has come forward to pay IT division a total fee of Rs.15,84,000 for engaging the services of two teams of consultants during the aforesaid period of 48 weeks.

Question No. 11:

In a company, Division A makes product A and Division B makes product B.

One unit of a needs one unit of B as input. State the unit transfer price to be adopted by the transferring Division A to B in each of the following independent situations:

(i) There is a ready market for A. There are no constraints for production or demand for A and A does not incur any external selling cost.

(ii) Supply is more than demand for A. External market resorts to distress price for A and this is expected to last for a temporary period. The product cannot be stocked until better times.

(iii) Product A is highly specialized. Internal specifications are too many that B has to opnly buy from A.

(iv) A has excess capacity. It can transfer any quantity to B. Goal congruence is to be achieved.

(v) A has no spare capacity, has adequate demand in a competitive market.

(vi) A has no spare capacity and has adequate demand in a competitive market. But on units transferred to B, it incurs Rs. 10 per unit as additional transport cost and Rs. 10,000 as fixed expenses irrespective of the number of units transferred.

Chapter: Target Costing

Question No. 12:

ABC Limited manufactures product Min addition to other products by using the same machines in Departments A and B. The cost data are as under:

Direct Material P: 4 kg @ Rs.6 per kg used in Dept. A;

Q: 8 kg @ Rs. 2.50 per kg added in Dept. B

Direct Labour: 2 hours @ Rs. 4 per hour in Dept. A;

3 hours @ 3 per hour in Dept. B

Overheads:

Basis of overheads recovery	Dept. A per rupee of direct material P (Rs.)	Dept. B per direct labour hour (Rs.)
Recovery rates at 80% of practical capacity		
Variable	0.80	2.00
Fixed	2.20	3.00
Depreciation component of fixed overhead rate	0.80	0.10
Other relevant data:		
Net plant and equipment value	70,00,000	1,20,000
Total depreciation per month	80,000	1,000

The working capital requirement of Product M based on a target volume of output of 1,000 units per month is estimated at Rs.1,24,000 per month is estimated at Rs.24,000 per annum.

Required:

A) Indicate the bottom line selling price of Product M assuming that:

   (i) Price is adequate to ensure contribution equivalent to 30% on investment made.
   (ii) The product is a new product about to be introduced in market.

B) Calculate the selling price in a situation where Product is well established in the market so as to yield return of 18% on investment.

Chapter: Life Cycle Costing

Question No. 13:

Mould & Dies (M&D) was established in 1980 and has enormous wealth of experience in the mould manufacturing industry and serves wide range of plastic moulds all over nation. Over the past decade, M&D has developed the reputation for quality products & services for customer focused approach. It deals in injection moulds, blow moulds, die sets, moulds base etc.

With a state-of-the-art infrastructure facility, M&D is able to meet the qualitative and quantitative demands of its clients. Its vision & mission is to provide high class manufactured products by using best quality raw materials.

M&D has developed a new product "M" which is about to be launched into the market and anticipates to sell 80,000 of these units at a sales price of Rs.300 over the product's life cycle of four years. Data pertaining to product "M" are as follows:

Costs of Design and Development of Molds, Dies, and Other Tools	Rs.8,25,000
Manufacturing Costs	Rs.125 per unit

Selling Costs	Rs.12,500 per year + Rs.100 per unit
Administration Costs	Rs.50,000 per year
Warranty Expenses	5 Replacement Parts per 25 units at Rs.10 per part; 1 Visit per 500 units (Cost Rs.500 per visit)

Required

(i) COMPUTE the product "M"'s 'Life Cycle Cost'.

(ii) SUGGEST two ways to maximize "M''s lifecycle return.

Chapter: Linear Programming

Question No. 14:

A farmer has a farm with 125 acres. He produces Carrot, Beetroot and Potato. Whatever he produces is fully sold in the market. He gets Rs. 5 per kg for Carrot, Rs. 4 per kg for Beetroot and Rs. 5 per kg for Potato. The average yield is 1500 kg of Carrot per acre, 1800 kg of Beetroot per acre and 1200 kg of Potato per acre. To produce each 100 kg of Carrot and Beetroot and 80 kg of Potato, a sum of Rs. 12.50 has to be spent for manure. Labour required for each acre to raise the crop is 6 man-days for Carrot and Potato each and 5 man-days for Beetroot. A total of 500 man-days of labour at the rate of Rs. 40 per man-day are available. Formulate a LPP to maximise the farmer's total profit.

Question No. 15:

A factory produces 3 products X_1, X_2 and X_3. Each of these products is processed in two departments, machining and Assembly. The processing time in hours for each product in each department and the total available time in hours in the departments and contribution per unit are given below:

Product	**Processing time (in hours)**		**Contribution Rs. /unit**
	Machining Department	**Assembly Department**	
X_1	4	3	8
X_2	4	2	6
X_3	6	4	5
Available time (hours)	384	288	

Exactly 30 units of X_3 must be produced.

(i) Determine the optimal product mix using simplex method and find the optimal profit.

(ii) Comment on the solution, objective function and the constraints.

Chapter: Simulation

Question No. 16:

A small retailer has studied the weekly receipts and payments over the past 200 weeks and has developed the following set of information:

Weekly Receipts (Rs.)	Probability	Weekly Payments (Rs.)	Probability
3000	0.20	4000	0.30
5000	0.30	6000	0.40
7000	0.40	8000	0.20
12000	0.10	10000	0.10

Using the following set of random numbers, simulate the weekly pattern of receipts and payments for the 12 weeks of the next quarter, assuming further that the beginning bank balance is Rs. 8000. What is the estimated balance at the end of the 12 weekly period? What is the highest weekly balance during the quarter? What is the average weekly balance for the quarter?

Random Numbers

For Receipts	03	91	38	55	17	46	32	43	69	72	24	22
For payments	61	96	30	32	03	88	48	28	88	18	71	99

According to the given information, the random number interval is assigned to both the receipts and the payments.

Chapter: The Assignment Problems

Question No. 17:

To stimulate interest and provide an atmosphere for intellectual discussion, a finance faculty in a management school decides to hold special seminars to four contemporary topics - leasing, portfolio management, private mutual funds, swaps and options. Such seminars should be held once in a week in the afternoons. However, scheduling these seminars (one for each topic, and not more than one seminar per afternoon) has to be done carefully so that the number of students unable to attend is kept to a minimum. A careful study indicates that the number of students who cannot attend a particular seminar on a specific day is as follows:

	Leasing	Portfolio management	Private mutual funds	Swaps and Options
Monday	50	40	60	20
Tuesday	40	30	40	30
Wednesday	60	20	30	20
Thursday	30	30	20	30
Friday	10	20	10	30

Find an optimum schedule of the seminars. Also find out the total number of students who will be missing at least one seminar.

Chapter: Program Evaluation and Review Technique

Question No. 18:

A network is given below-

- Name the paths and give their total duration.
- Give three different ways of reducing the above project duration by four weeks.

Activity	Duration	Activity	Duration
1 – 2	2 weeks	4 – 7	3 weeks
1 – 3	3 weeks	5 – 8	3 weeks
2 – 5	5 weeks	6 – 7	2 weeks
3 – 4	2 weeks	7 – 8	2 weeks
4 – 6	1 weeks	8 – 9	5 weeks

Question No. 19:

The following table relates to a network:

Activity	Normal Time (Days)	Crash Time (Days)	Normal Cost (Rs.)	Crash Cost (Rs.)
1-2	5	4	30,000	40,000
2-3	6	4	48,000	70,000
2-4	8	7	1,25,000	1,50,000
2-5	9	6	75,000	1,20,000
3-4	5	4	82,000	1,00,000
4-5	7	5	50,000	84,000

The overhead cost per day is Rs. 5,000 and the contract includes a penalty clause of Rs. 15,000 per day if the project is not completed in 20 days.

(i) Draw the network and calculate the normal duration and its cost.

(ii) Find out:

a. the lowest cost and the associated time.
b. the lowest time and the associated cost.

Chapter: Theory Topics

Question No. 20: Answers the following questions.

a. Explain the limitations of Backflush Accounting.
b. What is Re-engineering of Process? State it's principles
c. Differentiate between Lean Accounting and Traditional Standard Costing
d. Explain 4P's of TQM
e. Describe the usefulness of Pareto analysis

Question No. 21: Write short notes on the following

(a) Six Sigma

(b) Kaizen Costing

(c) Value Analysis

(d) Business Process Re-engineering.

(e) Socio Economic Costing

Section 2: Answers:

Answer to Question No. 1:

Alternative 1 – (Conversion versus immediate sale)

	Rs.	Rs.	Rs.
Sales revenue 900 units at Rs.300 per unit (Refer to working note 1)			2,70,000
Less: Relevant costs			
Material XY opportunity cost (Refer to working note 2)		21,000	
Material A – units @ Rs.90 per unit (Refer to working note 3		54,000	
Material B – 1,000 units @ Rs.45 per unit (Refer to working note 4)		45,000	
Direct Labour : Unskilled – 5,000 hours @ Rs.3 per hour	15,000		
Semi-skilled	Nil		
Highly skilled – 5,000 hours @ Rs.11 (Refer to working note 5)	55,000	70,000	
Variable overheads 15,000 hours @ Re.1 (Refer to working note 6)		15,000	
Extra selling and delivery expenses	27,000		
Extra advertising	18,000	45,000	2,50,000
Fixed advertising		Nil	
(To remain same, not relevant)			-
Alternative 2 – (Adaptation versus Immediate Sale)			
Saving on purchase of sub-assembly Normal spending – 1,200 units @ Rs.900 per unit	10,80,000		
Less: Revised spending – 900 units @ Rs.1,050 per unit (Refer to working note 7)		9,45,000	1,35,000
Less: Relevant costs:			
Material XY opportunity cost (Refer to working note 2)		21,000	
Material C – 1,000 units @ Rs.37 (Refer to working note 8)		37,000	
Direct labour			
Unskilled – 4,000 hours @ Rs.3 per hour	12,000		
Semi-skilled	Nil		
Highly skilled – 4,000 hours @Rs.11 per hour (Refer to working note 5, 6)	44,000	56,000	
Variable Overheads – 9,000 hours @ Re.1/- per hour (Refer to working note 6)		9,000	1,23,000
Fixed overheads	Nil		-
Net relevant savings			12,000

Evaluation:

The evaluation of two alternatives clearly shows that Alternative 1, yields higher net revenue of Rs.8,000 (Rs.20,000 – Rs.12,000). Hence because of higher net revenue of Alternative 1, it is advisable to convert material XY into a specialized product.

Working notes:

1. There will be additional sales revenue of Rs.2,70,000 if Alternative 1 is chosen.
2. Acceptance of either Alternative 1 or 2 will mean a loss of revenue of Rs.21,000 from the sale of the obsolete material XY and hence it is an opportunity cost for both of the alternatives. The original purchase cost of Rs.75,000 is a sunk cost and thus not relevant.
3. Acceptance of Alternative 1 will mean that material A must be replaced at an additional cost of Rs.54,000.
4. Acceptance of Alternative 1 will mean diversion of material B from the production of product Z.

   The excess of relevant revenues over relevant cost for product Z is Rs.180 (Rs.390 – Rs.210) and each unit of product Z uses four units of material B. The lost contribution (excluding the cost of material B which is incurred for both alternatives) will therefore be Rs.45 for each unit of material B that is used for converting the obsolete materials into a specialised product.
5. Unskilled labour can be matched exactly to the company's production requirements. Hence acceptance of either alternative 1 or 2 will cause the company to incur additional unskilled labour cost at Rs.3 for each hours. It is assumed that the semi-skilled labour will be able to meet the extra requirements of either alternatives at no extra cost to the company. Hence, cost of semi-skilled labour will not be relevant. Skilled labour is in short supply and can only be obtained by reducing the production of product L, resulting in a loss of contribution of Rs.24 (given) or Rs.6 per hour of skilled labour. Hence the relevant labour cost will be Rs.6 (contribution lost per hour) + Rs.5 (hourly rate of skilled labour) i.e. Rs.11 per hour.
6. It is assumed that for each direct labour of input, variable overhead will increase by Re.1 hence for each alternative using additional direct labour hours, variable overheads will increase.
7. The cost of purchasing the sub-assembly will be reduced by Rs.1,35,000 if the second alternative is chosen and so these savings are relevant to the decision.
8. The company will incur additional variable costs, of Rs.37 for each unit of material C that is manufactured, so the fixed overheads for material C viz. Rs.18/- per unit is not a relevant cost.

Answer to Question No. 2:

(i) Fixed Costs

	Rs.	Rs.
Troupe hire	71,000	
Rent	14,000	
A/C	7,400	
VIP Snacks	600	93,000

Fixed Revenues: Seats Sold by the troupe		54,000	
Sponsor's advertisement		9,000	63,000
Net fixed costs recovered by Entertain U to Break even			30,000
Seats Sold by the troupe	54,000		
Sponsor's advertisement	9,000	63,000	
	VIP	Med	Lost
Total seats available	90	360	180
Less: Free	30		
Less: Sold by troupe	30	180	90
Can be sold by Entertain U	30	180	90
Row Price	320	220	120
Variable cost (Snacks)	20	20	20
Contribution per seat	300	200	100
Demand	1	3	1

$$\frac{300\times1+200\times3+100\times1}{1+3+1} = \frac{1000}{5} = 200$$

Break Even Point for Entertain U = $\frac{30,000}{200}$ = 150 seats

	VIP Rows	Middle Level	Last Level	
BF Seats Total 150	30	90	30	
Contribution per unit	300	200	100	
Contribution (Rs.)	9,000	18,000	3,000	Rs. 30,000

Category wise occupancy at Break Even Point

VIP 30+30+30 = 90

Middle = 90+180 = 270

Last = 120

(ii) If demand is in the ratio 2 : 2 : 5

Weighted contribution per seats = $\frac{2\times300+2\times200+5\times100}{9}$ = 180 Seats

Ratio	40	40	100
Quantity available	30	180	90
Break Even quantity	30	10	90
		10	10
	30	60	90

Contribution per unit	300	200	100
No. of seats	30	60	90
Contribution Rs.	9,000	12,000	9,000
		Total = 30,000	

Answer to Question No. 3:

(i) Assembly Labour is a Limiting Factor & to fulfill Maximum Market Demand:

Statement Showing Contribution per unit as well as

Contribution per assembly hour

	Demand (Units)			
	40,000	55,000	36,000	30,000
	A	B	C	D
Selling Price (Rs./u)	100	109	121	124
Material Cost (Rs./u)	40	42	46	40
Labour Cost (Rs./u)				
Assembly Dept.	15	20	15	20
Machine Dept.	18	24	36	30
Variable Overheads (Rs./u)	6	8	6	8
Contribution (Rs./u)	21	15	18	26
Assembly Hours per unit	1.5	2	1.5	2
Contribution (Rs./hr.)	14	7.5	12	13
Rank [Contribution (Rs./hr.)]	I	IV	III	II
Sub-Contract Price (Rs./u)	85	95	101	100
Contribution (Rs./u) [Sub-Contract]	15	14	20	24

It is more profitable to sub-contract C, since contribution is higher in sub -contracting.

Allocation of Assembly Hours on the basis of ranking

Produce A as much as possible	=	40,000 units
Hours Required	=	60,000 hrs (40,000 units × 1.5 hrs.)
Balance Hours Available	=	1,60,000 hrs (2,20,000 hrs. − 60,000 hrs.)
Produce the Next Best	=	30,000 units of D
Hours Required	=	60,000 hrs (30,000 units × 2 hrs.)
Balance Hours Available	=	1,00,000 hrs (1,60,000 hrs. − 60,000 hrs.)
Produce the Next Best	=	50,000 units of B ($\frac{100000}{2}$)

Statement Showing Profit on the basis of ranking

Product	Particulars	Contribution/unit (Rs.)	Contribution (Rs.)
A	Produce: 40,000 units	21	8,40,000
	Subcontract: NIL units	15	---
B	Produce: 50,000 units	15	7,50,000
	Subcontract: 5,000 units	14	70,000
C	Produce: NIL units	18	---
	Subcontract: 36,000 units	20	7,20,000
D	Produce: 30,000 units	26	7,80,000
	Subcontract: NIL units	24	---
Total Contribution			31,60,000
Less: Fixed Cost			12,50,000
Net Profit			19,10,000

Decision:

However AXE Ltd. can save fixed cost of Rs. 4,07,000 (Rs. 12,50,000 − Rs. 8,43,000) if it keeps its production limited to 1,00,000 units. But in this case AXE Ltd. has to subcontract 20,000 units of B to fulfill maximum market demand. Contribution Lost from subcontracting of 20,000 units amounts to Rs. 20,000 [20,000 units × (Rs. 15 − Rs. 14)]. Hence optimum profit would be Rs. 22,97,000 [Rs. 19,10,000 + Rs. 4,07,000 − Rs. 20,000].

Statement Showing Production Vs Sub Contract (units) and Profit – Best Strategy

Prod	Produced [Units]	Sub-Contract [Units]	Contribution [Production] (Rs.)	Contribution [Sub-Contract] (Rs.)	Total Contribution (Rs.)
A	40,000	---	8,40,000	---	8,40,000
B	30,000	25,000	4,50,000	3,50,000	8,00,000
C	---	36,000	---	7,20,000	7,20,000
D	30,000	---	7,80,000	---	7,80,000
Total Contribution					31,40,000
Less: Fixed Cost					8,43,000
Net Profit					22,97,000

(ii) Break Even Point:

Statement Showing Recovery of Fixed Cost

Particulars	Amount (Rs.)
Fixed Cost (at Best Strategy)	8,43,000
Less: Recovered from Product 'D' (Rs.26 × 30,000 units)	7,80,000
Balance	63,000
Less: Recovered from Product 'A' ($\frac{63000}{21}$ =3,000units)	63,000

Minimum number of units to be produced to achieve break-even point:

Product D = 30,000 units

Product A = 3,000 units

Accordingly, earliest BEP at 33,000 units

(iii) Assembly Labour is Not a Limiting Factor & No Requirement to Fulfill Max. Market Demand:

Statement Showing Comparison of Contribution per unit (Make Vs Sub-Contracting)

	Demand (Units)			
	40,000	55,000	36,000	30,000
	A	B	C	D
Contribution (Rs./u) [Make]	21	15	18	26
Contribution (Rs./u) [Sub-Contract]	15	14	20	24
Best Strategy	Make	Make	Sub-Contracting	Make
Ranking for Production	II	III	---	I

Decision:

From the above comparison table it can be seen manufacturing of product A, B and D gives higher contribution per unit as compared to sub-contracting. Therefore, AXE Ltd. should manufacture the entire quantity of product A, B and D and subcontract the production of product C. However AXE Ltd. can save fixed cost of Rs. 4,07,000 (Rs. 12,50,000 − Rs. 8,43,000) by limiting its production level to 1,00,000 units only. In this case AXE Ltd. will make 30,000 units, 40,000 units and 30,000 units of product D, A and B respectively. But in this case AXE Ltd. has to subcontract 25,000 units of B to earn maximum profit.

Statement Showing Production Vs Sub Contract (units) and Profit – Best Strategy

Prod.	Produced [Units]	Sub Contract [Units]	Contribution [Production] (Rs.)	Contribution [Sub-Contract] (Rs.)	Total Contribution (Rs.)
A	40,000	---	8,40,000	---	8,40,000
B	30,000	25,000	4,50,000	3,50,000	8,00,000
C	---	36,000	---	7,20,000	7,20,000
D	30,000	---	7,80,000	---	7,80,000
Total Contribution					31,40,000
Less: Fixed Cost					8,43,000
Net Profit					22,97,000

Answer to Question No. 4:

Working Notes:

Product	Budget Margin (BM) Budgeted Price – Budgeted Variable Cost		Actual Margin (AM) Actual Price – Budgeted Variable Cost
V	1.2 – 0.5	= 0.7	1 - 0.5 = 0.5
C	1.5 – 0.6	= 0.9	1.35 – 0.6 = 0.75
S	1.8 – 0.7	= 1.1	2.0 – 0.7 = 1.3
A	2.5 – 1.0	= 1.5	3.0 – 1.0 = 2.0
	Actual Quantity x Actual Margin (1)		Actual Quantity x Budgeted Margin (2)
V	1,80,000 x 0.5 = 90,000		1,80,000 x 0.7 = 1,26,000
C	2,70,000 x 0.75 = 2,02,500		2,70,000 x 0.9 = 2,43,000
S	3,30,000 x 1.3 = 4,29,000		3,30,000 x 1.1 = 3,63,000
A	1,80,000 x 2.0 = 3,60,000		1,80,000 x 1.5 = 2,70,000
	9,60,000 = 10,81,500		9,60,000 = 10,02,000
	Actual Qty. in Budgeted mix x Budgeted Margin (3)		Budgeted Quantity x Budgeted Margin (4)
V	3,00,000 x 0.7	= 2,10,000	2,50,000 x 0.7 = 1,75,000
C	3,60,000 x 0.9	= 3,24,000	3,00,000 x 0.9 = 2,70,000
S	2,40,000 x 1.1	= 2,64,000	2,00,000 x 1.1 = 2,20,000
A	60,000 x 1.5	= 90,000	50,000 x 1.5 = 75,000
	9,60,000	8,88,000	8,00,000 = 7,40,000

	Sales Margin – Price Variance (5) = (1) – (2)	Sales Margin Mix Variance (6) = (2) - (3)	Sales Margin Volume Variance (7) = (2) – (4)
V	36,000 (A)	84,000 (A)	49,000 (A)
C	40,500 (A)	81,000 (A)	27,000 (A)
S	66,000 (F)	99,000 (F)	1,43,000 (F)
A	90,000 (F)	1,80,000 (F)	1,95,000 (F)
	79,500 (F)	1,14,000 (F)	2,62,000 (F)

Answer to Question No. 5:

Statement Showing Reconciliation Between

Budgeted Profit [F.Y. 2012-13] & Actual Profit [F.Y. 2013-14]

Particulars	(Rs. in lacs)	(Rs. in lacs)
Budgeted Profit		200.00
Sales Margin Variances:		
Price	427.50 (F)	
Volume	10.00 (A)	417.50 (F)
Direct Material Variances:		
Price	307.50 (A)	
Usage	150.00 (A)	457.50 (A)
Variable Overheads Variances:		
Expenditure	25.00 (A)	
Efficiency	25.00 (A)	50.00 (A)
Fixed Overheads Variances:		
Expenditure	67.50 (A)	
Volume	15.00 (A)	82.50 (A)
Actual Profit		27.50

Computation of Variances (Rs. In Lakhs)

Sales Variances

Price Variance = Actual Sales – Standard Sales

= Rs.3,277.50 – Rs.2,850.00

= Rs.427.50 (F)

Volume Variance = Standard Sales – Budgeted Sales

= Rs.2,850.00 – Rs.3,000.00

= Rs.150 (A)

Sales Margin Variances

Sales Margin Price Variance = Sales Price Variance

= Rs.427.50 (F)

Sales Margin Volume Variance = Sales Volume Variance × Budgeted Net Profit Ratio

= Rs.150 (A) × $\frac{200}{3,000}$

= Rs.10 (A)

Material Variances

Material Price Variance = Standard Cost of Actual Quantity – Actual Cost

= Rs.2,050.00 – Rs.2,357.50

= Rs.307.50 (A)

Material Usage Variance = Standard Cost of Standard Quantity for Actual Output – Standard Cost of Actual Quantity

= Rs.1,900 – Rs.2,050

= Rs.150 (A)

Variable Overhead Variances

Expenditure Variance = Budgeted Variable Overheads for Actual Hours – Actual Variable Overheads

Or

= Std. Rate *per unit* × Expected Output for Actual Hours Worked – Actual Variable Overheads

= Rs.500 – Rs.525

= Rs.25 (A)

Efficiency Variances = Standard Variable Overheads for Production – Budgeted Variable Overheads for Actual Hours

Or

= Std. Rate *per unit* × Actual Output – Std. Rate *per unit* × Expected Output for Actual Hours Worked

= Rs.475 – Rs.500

= Rs.25 (A)

Fixed Overhead Variances

Expenditure Variance = Budgeted Fixed Overheads – Actual Fixed Overheads.

= Rs.300.00 – Rs.367.50

= Rs.67.50 (A)

Volume Variance = Absorbed Fixed Overheads – Budgeted Fixed Overheads

= Rs.285 – Rs.300 = Rs.15 (A)

Working Notes (Rs. **in lacs)**

Note-1:

Sales in F.Y. 2013-2014	3,277.50
Less: Increase due to *price rise* [Rs.3,277.50 lacs × 15/115]	427.50
Sales in F.Y. 2013-2014 at F.Y. 2012-2013 Prices [Standard Sales]	2,850.00
Sales in F.Y. 2012-2013	3,000.00
Fall in Sales in F.Y. 2013-2014 [Rs.3,000 lacs − Rs.2,850 lacs]	150.00
Percentage fall	5%

Note-2:

Material Cost In F.Y. 2012-2013	2,000.00
Less: 5% for Decrease in Volume	100.00
'Standard Material Usage' at F.Y. 2012-13 Prices (Standard Cost of Standard Quantity for Actual output)	1,900.00
Actual Material Cost F.Y. 2013-2014 *Less:* 15% Increase in Prices [Rs.2,357.50 lakhs × 15/115]	2,357.50 307.50
Actual Materials Used, at F.Y. 2012-2013 Prices (Standard Cost of Actual Quantity)	2,050.00

Note-3:

Variable Overheads Cost in F.Y. 2012-13	500.00
Less: 5% due to fall in Volume of Sales in F.Y. 2013-14	25.00
"Standard Overheads for Production" in F.Y. 2013-14	475.00
Actual Variable Overheads Incurred in F.Y. 2013-14	525.00
Less: 5% for Increase in Price [Rs. 525 lakhs × 5 / 105]	25.00
Amount Spent in F.Y. 2013-14 at F.Y. 2012-13 Prices (Budgeted Variable Overheads for Actual Hours)	500.00

Note-4:

Fixed Overheads Cost in F.Y. 2012-13	300.00
Less: 5% due to fall in Volume of Sales in F.Y. 2013-14	15.00
"Standard Overheads for Production" in F.Y. 2013-14. (Absorbed Fixed Overheads)	285.00

Answer to Question No. 6:

Sales realisation		Realization from Debtors	
Month	Sales	Credit sales	Rs.
February	14,000 × 90%	12,600 × 50%	= 6,300
March	15,000 × 90%	13,500 × 50%	= 6,750
			13,050 in April 2019
March	15,000 × 90%	13,500 × 50%	= 6,750
April	16,000 × 90%	14,400 × 50%	= 7,200
			13,950 in May 2019
April	16,000 × 90%	14,400 × 50%	= 7,200
May	17,000 × 90%	15,300 × 50%	= 7,650
			14,850 in June 2019

Cash Budget

Rs.

Particulars	April'19	May'19	June'19
A. Opening Balance	6,000	3,950	3,000
B. Receipts from:			
Cash Sales	1,600	1,700	1,800
Debtors	13,050	13,950	14,850
Advance	-	-	9,000
Dividends from Investments	-	-	1.000
Total B	14,650	15,650	26,650
Total A+B	20,650	19,600	29,650
C. Payments:			
Creditors	9,600	9,000	9,200
Wages	750	800	900
	2,400	2,700	3,000
Overheads	950	1,000	1,100
	1,000	1,100	1,150
Plant & Machinery :			
Installment	2,000	2,000	2,000
Preference Dividend	-	-	10,000
Advance Income Tax	-	-	2,000
Total C	16,700	16,600	29,350
D. Closing Balance(A+B) -(C)	3,950	3,000	300

Answer to Question No. 7:

a) Computation of Cost Per unit Using Conventional Methods:

	X	Y	Z
Costs	Rs.	Rs.	Rs.
Materials	25	15	30
Labour	12	4	16
Overheads	63	36	90
Factory Cost	100	55	136

(b) Under ABC Costing

Total overheads Rs.

X	= 3500 x 3.5 x 18	=	2,20,500
Y	= 2250 x 2 x18	=	81,000
Z	= 6000 x 5 x18	=	5,40,000
			8,41,500

	Setup Cost (Rs.)	Machine Cost (Rs.)	Material Handling Cost (Rs.)	Inspection Expenses (Rs.)	Total (Rs.)
Costs	2,52,450 (30%)	2,10,375 (25%)	1,85,130 (22%)	1,93,545 (23%)	8,41,500 (100%)
Cost Driver	No. of setups	Machine hours	No. of Moment of Materials	No. of Inspections	
Cost driver rates	382.50 (252450/660)	4.5 (210375/46750)	1542.75 (185130/120)	212.69 (193545/910)	

Computations per unit

Product / Element	X	Y	Z
Units Produced	3500	2250	6000
Set up cost per unit (Rs.)			
i. Number of Set ups	65	110	485
ii. Set up Cost for the Product	24863	42075	185512
iii. Set up Cost per Unit	7.10	18.70	3092
Machine cost per unit (Rs.)			
iv. Machine Hours	12250	4500	30000
v Machine Cost for the Product	55125	20250	135000
vi. Machine Cost per Unit	15.75	9.00	22.50

Material handling cost per unit (Rs.) i. Number of Movements ii. Material handling Cost for the Product iii. Material handling Cost per Unit	15 23141 6.61	26 40112 17.82	79 121877 20.31
Inspection cost per unit (Rs.) i. Number of Inspections ii. Inspection Cost for the Product iii. Inspection Cost per Unit	150 31903 9.12	190 40411 17.96	570 121233 20.21

Cost per unit under ABC costing

Product / Element	X (Rs.)		Y (Rs.)			Z (Rs.)
Materials		25.00		15.00		30.00
Labour		12.00		4.00		16.00
Overheads						
Setup Cost	7.10		18.70		30.92	
Machine cost	15.75		9.00		22.50	
Material Handling Cost	6.61		17.82		20.31	
Inspection Cost	9.12	38.58	17.96	63.48	20.21	93.94
Total Cost		75.58		82.48		139.94

Answer to Question No. 8:

Statement Showing Allocation of Seats in the Aircraft

Existing Situation	
For Destination A to B	
Seating Capacity of the Aircraft	260 passengers
Average Number of Passengers *per flight*	240 passengers
Proposed Situation	
For Destination D to B	
Seats Booked by Haltgo Ltd.	50 Seats
For Destination A to B	
Seats Available {260 (capacity) – 50 (booked by Haltgo Ltd. for destination D to B)}	210 Seats

Requirement of Regular Passengers {240 (original no. of passengers) – 25 (no. of passengers drop out	215 Seats
due to wastage of time)}	
Possible Allocation of Seats to Regular Passengers	210 Seats
For Destination A to D	
Seats Available {260 (capacity) – 210 (seats allocated to regular passengers of destination A to B)}	50 Seats
Requirement of Agents (tickets can be sold by Flyway's travel agents)	60 Seats
Possible Allocation to Agents of Flyway Ltd.	50 Seats

Existing Situation

Profit per Flight

	Rs.	Rs.
Revenue *per passenger* (Gross Fare)		5,000
Less: Total Variable Cost *per passenger:*		
10% Commission on Fare	500	
Food	300	800
Contribution *per passenger*		4,200
Contribution *per flight* (Contribution for 240 Passengers)		10,08,000
Less: Fixed Costs *per flight*		
Fuel Cost	90,000	
Annual Lease Cost	2,00,000	
Ground Service, Baggage Handling / Checking in	40,000	
Flight Crew Salaries	48,000	3,78,000
Profit *per flight*		6,30,000

Break-even Point

Break-even Number of Passengers (378,000/4200)	90 Passengers

Proposed Situation

Contribution per Passenger (A to D)

	Rs.	Rs.
Revenue *per passenger* (Gross Fare)		3,000
Less: Total Variable Cost *per passenger:*		
10% Commission on Fare	300	
Food#	300	600
Contribution *per passenger*		2,400

Statement Showing Additional Revenue / Expenditure from Haltogo Ltd.'s Offer

	Additional	
	Cost (Rs.)	Revenue (Rs.)
Revenue from Destination D to B (50 Seats × Rs.2,700)		1,35,000
Contribution from Destination A to D (50 Seats × Rs.2,400)		1,20,000
Contribution Lost for Destination A to B (30 Seats* × Rs.4,200)	1,26,000	
Snacks (260 Passengers × Rs. 200)	52,000	
Fuel Cost	45,000	
Airport Landing / Baggage Handling Charges	19,000	
Total	2,42,000	2,55,000

(*) 240 Seats (existing) Less 210 Seats (proposed)

(#) All the passengers booked for destination A to D are also served food free of cost.

Answer to Question No. 9:

Per unit Cost

Materials: Iron 10kg @ Rs. 5/-	50		
Copper 5 kg @ Rs. 8/-	40		90
Wages X : 3 hrs @ 15 Rs. /Hr.	45		
Y : 5 hrs @ 12 Rs. /Hr	60		105
Variable OH (Production) X : 8 hrs × 3 hrs	24		
Y : 5 hrs × 5 hrs	25		49
Variable OH – Selling			20
Total Variable Cost			264

Fixed Off: X : 8/hrs × 3 hrs.	24		
Y : 5/hrs × 5 hrs	25		49
Total Cost			313

(i) If pricing strategy is to penetrate the market, the minimum price for a new product should be the variable cost i.e. Rs. 264. In some circumstances, it can also be sold below the variable cost, if it is expected to quickly penetrate the market and later absorb a price increase. Total Variable Cost is the penetration price.

(ii) When the alloy is well established, the minimum selling price will be the total cost – including the fixed cost i.e. Rs. 313 per unit. Long run costs should cover at least the total cost.

Answer to Question No. 10:

Transfer Price is Rs. 4,500 for each consulting day.

Profit mark-up = 150%

Let cost = x

Profit $= x \times \frac{1500}{100}$

$= 1.5x$

Cost + profit = Transfer price

Or, $x + 1.5x = 4{,}500$

or, $2.5x = 4{,}500$

or, $x = 1{,}800$

Cost = Rs. 1,800 and profit = $1.5x = 1.5 \times 1{,}800$

= Rs. 2,700

Variable cost (80%) = Rs. 1,800×80%

= Rs. 1,440

Fixed cost (20%) = Rs. 1,800×20%

= Rs. 360.

Scenario (i):

Every consultancy team is fully engaged. There is no idle time or spare capacity.

Hence, transfer price = Marginal cost plus opportunity cost

Marginal cost = Rs. 1,440

Saving for internal work = Rs. 200

Net Marginal Cost = Rs. 1,240

Opportunity cost is the lost contribution.

Lost contribution = Contribution from external client

= Fee charged from external client – Variable cost

= Rs. (4,500 – 1,440)

= Rs.3,060.

Or Transfer price = Rs. 1,240 + 3,060

= Rs. 4,300 per consulting day per team.

Scenario (ii):

One team is idle. Idle time has no opportunity cost. Variable cost for internal work is Rs. 1,240 per consulting day. Second team is busy. Hence opportunity cost is relevant in case of second team. Hence charge of second team is Rs. 4,300 per consulting day per team.

Average of charge of two teams = Rs. (1,240 + 4,300) / 2

= Rs. 2,770 per consulting day per team.

Scenario (iii):

New client offers a fee of Rs. 15,84,000

Duration: 5 days of 48 weeks x 2 teams = 480 days

Fee per day 15,84,000 / 480	= Rs. 3,300
Variable cost	= Rs. 1,440
Contribution Rs. (3,300 – 1,440)	= Rs. 1,860
Fee for consulting day for internal work:	
Variable cost	= Rs. 1,240
Contribution lost	= Rs. 1,860
Fee to be charged	= Rs. 3,100 per consulting day per team.

Answer to Question No. 11:

Transfer Price

(i) Market Price = Transfer price

(ii) For any quantity that the market can absorb, Price offered by B or Market price whichever is higher

For quantity that the market can no longer absorb, any price that B may offer

(iii) Maximum Transfer price =Total Cost + Profit subject to maxim price B can pay to keep its ultimate product profitable.

Minimum transfer price -= variable cost

(iv) Transfer Price = Variable Cost to A

(v) Transfer price = Either Market Price or Variable Cost + Opportunity Cost of diverting market sale

(vi) Transfer price = Variable Cost + Opportunity Cost + specific cost + (fixed cost/units transferred)

Transfer Price/unit = (Market Price + 10) + (10,000/units transferred)

Alternatively if we consider that as per question, “one unit of A needs one unit of B”. Hence students can assume B transfers to A. Then, considering each sub division independently, B will offer A at market price of B less any avoidable selling expenses on units transferred to A.

(i) A will stop buying from B since stock already exists.

(ii) Maximum Transfer price =Total Cost + Profit subject to maxim price B can pay to keep its ultimate product profitable.

Minimum transfer price = variable cost

(iii) Transfer Price = Variable Cost to A

(iv) A will pay up to market price of B, less any avoidable selling expenses for transfers to A

(v) Transfer price = Variable Cost + Opportunity Cost + specific cost + (fixed cost/units transferred)

Transfer Price/unit = (Market Price + 10) + (10,000/units transferred)

Answer to Question No. 12:

(A) It is given in the question that contribution equivalent to 30% on investment is adequate. Therefore, for arriving at the bottom line price of product M, it is necessary to work out the cost of production and capital employed (consisting of net fixed assets and working capital).

Statement showing cost of production of product M

Direct material	- Dept. A (P - 4 × Rs. 6) - Dept. B (Q- 8 × Rs. 2.5)	Rs. 24.00 20.00	44
Direct labour	- Dept. A (2 × Rs. 4) - Dept. B (3 × Rs. 3)	8 9	17
Variable overheads:	- Dept. A (Rs. 24 × Rs. 0.8) - Dept. B (3 hrs × 2)	19.20 6.00	25.20
Total variable costs			86.20
Fixed overheads	- Dept. A (?24 × 2.20) - Dept. B (3 hrs 13)	52.80 9.00	61.80
Total cost of production			148.00

Statement showing Capital Employed

	Dept. A	Dept. B
Depreciation per unit of M	Rs. 24 x 0.8 = 19.20	3 hrs. x 0.1 = 0.30
Net Fixed Assets	Rs. 70, 00,000	Rs. 1,20,000

Depreciation p.a.	9,60,000	12,000
NFA for 12, 000 units p.a.	16,80,000*	36,000@

Total N.F.A.	
(Rs.16,80,000 + Rs. 36,000) =	Rs.17,16,000
Working Capital	1,24,000
Total capital employed	18,40,000

(A) (i) Bottom line price (contribution 30% on investment)

= Rs.18,40,000 x 0.3 = Rs.5,52,000

Contribution per unit = Rs.5,52,000 ÷ Rs. 12,000 = Rs.46

Bottom line price as per (a) = Rs.86.20 + 46.00 = Rs.132.20

Bottom line price as per (ii) i.e., for new product (variable cost only) = 86.20.

(B) Selling price of the well-established product
= Total cost + 18% on investment = Rs.148 + 18% of (18,40,000 + 12,000) = Rs.175.60.
*(Rs.70 lakhs ÷ Rs. 9.60 lakhs) × 19.20 x 12,000

@(Rs.1.20 lakhs ÷ 0.12 lakhs) × 0.30 × 12,000

Answer to Question No. 13:

(i) Statement Showing "M's Life Cycle Cost (80,000 units)"

Particulars	**Amount (Rs.)**
Costs of Design and Development of Molds, Dies, and Other Tools	8,25,000
Manufacturing Costs (Rs.125 × 80,000 units)	1,00,00,000
Selling Costs (Rs.100 × 80,000 units + Rs.12,500 × 4)	80,50,000
Administration Costs (Rs.50,000 × 4)	2,00,000
Warranty (80,000 units / 25 units × 5 parts × Rs.10) (80,000 units / 500 units × 1 visit × Rs.500)	 1,60,000 80,000
Total Cost	1,93,15,000

(ii) Following ways are suggested to maximize "M" lifecycle return:

R&D Costs

Often significant part of cost is incurred at the R&D phase of new product, hence M&D should carefully plan and design its new product "M" as it will determine the number of parts, production process to be used etc. M&D can apply value engineering here. It involves improving product quality, reducing product costs, fostering innovation, eliminating unnecessary and costly design elements, ensuring efficient investment in product, and developing implementation procedures. Value engineering is most successful when it is performed early in product development stage. A value engineering study should be performed within the first 25-30% of the design effort prior to selecting the final design alternative. Here, it is also important that R&D team should work as a part of cross functional team i.e. (participate in a group of people from different functional areas), to minimise lifecycle cost and the production cycle time in new development.

Speed up the Product Launch

In cut throat competitions, it is important for M&D to get new product 'M' launch into the market as soon as possible since this will give "M" a long stay in the market place without competition in the market. Competitor always try to launch a rival product as quickly as possible in order to gain 'competitive edge'. M&D may lose overall profitability if it delays in launching of Product 'M'. It is usually worthwhile incurring extra costs to keep the launch on schedule or to speed up the launch.

Answer to Question No. 14:

Let C, B and P be the number of acres allotted for cultivating Carrot, Beetroot and Potato respectively. The profit from the produces is determined in the following manner –

Particulars per acre	Carrot	Beetroot	Potato
Selling Price	Rs. 5 / Kg x 1500 kgs = Rs. 7500	Rs. 4 / kg x 1800 kgs = Rs. 7200	Rs. 5 / kg x 1200 kgs = Rs. 6000
Less: Manure Cost	1500 kgs x Rs. 12.50/100 = Rs. 187.50	1800 kgs x Rs. 12.50/100 = Rs. 225.00	1200 kgs x Rs. 12.50/80 = Rs. 187.50
Less: Labour Cost	Rs. 40 x 6 = Rs. 240	Rs. 40 x 5 = Rs. 200	Rs. 40 x 6 = Rs. 240
Profit per acre	Rs. 7072.50	Rs.6775	Rs. 5572.50

Maximise Profit Z = 7072.50 C + 6775 B + 5572.5 P

subject to $C + B + P \leq 125$ (Land Availability)

$6C + 5B + 6P \leq 500$ (Man Days Availability)

$C, B, P \geq 0$ (Non-Negativity Assumption)

Answer to Question No. 15:

(i) Let x_1, x_2, and x_3 represent the number of units of products X_1, X_2 and X_3 respectively then the mathematical formulation of the linear programming problem based on the above data will be as follows:

Maximize

$$Z = 8x_1 + 6x_2 + 5x_3$$

Subject to the Constraints:

$$4x_1 + 4x_2 + 6x_3 \leq 384$$

$$3x_1 + 2x_2 + 4x_3 \leq 288$$

$$x3 = 30$$

$$x_1, x_2, x_3 \geq 0$$

Or

Maximize

$$Z = 8x_1 + 6x_2 + 5 \text{ x } 30$$

Subject to the Constraints:

$$4x_1 + 4x_2 + 6 \text{ x } 30 \leq 384$$

$$3x_1 + 2x_2 + 4 \text{ x } 30 \leq 288$$

$$x_1, x_2 \geq 0$$

Or

Maximize

$$Z = 8x_1 + 6x_2 + 150$$

Subject to the Constraints:

$$4x_1 + 4x_2 \leq 204$$

$$3x_1 + 2x_2 \leq 168$$

$$x_1, x_2 \geq 0$$

By introducing slack variables in the above constrains, we get:

Maximize

$Z = 8x_1 + 6x_2 + 150 + 0s_1 + 0s_2$ *Subject to:*

$$4x_1 + 4x_2 + s_1 = 204$$

$$3x_1 + 2x_2 + s_2 = 168$$

$x1, x2, s1, s2 \geq 0$

We shall prepare the simplex tableau as follows:

SIMPLEX TABLEAU-I

	Cj→		8	6	0	0	Min. Ratio
C_B	Basic Variable (B)	Value of Basic Variables $b(=X_B)$	x_1	x_2	s_1	s_2	
0	s_1	204	4	4	1	0	←51
0	s_2	168	3	2	0	1	56
	$Zj = \sum CBiXj$		0	0	0	0	
		$C_j - Z_j$	8↑	6	0	0	

SIMPLEX TABLEAU-II

	Cj→		8	6	0	0
C_B	Basic Variable (B)	Value of Basic Variables $b(=X_B)$	x_1	x_2	s_1	s_2
8	x_1	51	1	1	1/4	0
0	s_2	15	0	−1	−3/4	1
		$Zj = \sum CBiXj$	8	8	2	0
		$Cj - Zj$	0	−2	−2	0

Since all numbers in the $C_j - Z_j$ row are either negative or zero, the optimum solution to the given problem has been obtained and is given by x_1 = 51 units, x_2 = 0 units and x_3 = 30 units (already given).

Maximum Contribution = Rs.8 ×51 units + Rs.6×0 units + Rs.5×30 units = Rs. 558

(ii) Solution, Objective Function and The Constraints

'When a *non-basic variable* in the final tableau (showing optimal solution) to a problem has a *net zero contribution* then optimal solution to given problem is not one but *multiple*' *and* multiple optimal solutions can occur when the *objective function is parallel to a constraint*. In the above case x_2 and s_1 are non-basic variables in the optimal table (Simplex Tableau-II) and have $C_j - Z_j \neq 0$. Hence, LPP has no multiple optimal solutions. Accordingly *objective function* is also not parallel to *constraint*.

Answer to Question No. 16:

Range of random numbers							
Receipt (Rs.)	Probability	Cumulative probability	Range	Payments (Rs.)	Probability	Cumulative probability	Range
3000	0.20	0.20	0-19	4000	0.30	0.30	0-29
5000	0.30	0.50	20-49	6000	0.40	0.70	30-69
7000	0.40	0.90	50-89	8000	0.20	0.90	70-89
12000	0.10	1.00	90-99	10000	0.10	1.00	90-99

Simulation of Data for a period of 12 weeks					
Week	Random No. for receipt	Expected Receipt (Rs.)	Random No. for payment	Expected Payment (Rs.)	Weekend Balance (Rs.)
Opening Balance					8000
1	03	3000	61	6000	5000 (8000 + 3000 – 6000)
2	91	12000	96	10000	7000
3	38	5000	30	6000	6000
4	55	7000	32	6000	7000
5	17	3000	03	4000	6000
6	46	5000	88	8000	3000
7	32	5000	48	6000	2000
8	43	5000	28	4000	3000
9	69	7000	88	8000	2000
10	72	7000	18	4000	5000
11	24	5000	71	8000	2000
12	22	5000	99	10000	(3000)

Estimated balance at the end of 12^{th} week	=	Rs. (3,000)
Highest balance	=	Rs. 7,000
Average balance during the quarter	=	45,000/12 = Rs. 3,750

Answer to Question No. 17:

This is an unbalanced minimisation assignment problem. We first of all balance it by adding a dummy topic.

	Leasing	Portfolio Management	Private Mutual funds	Swaps and options	Dummy
Monday	50	40	60	20	0
Tuesday	40	30	40	30	0
Wednesday	60	20	30	20	0
Thursday	30	30	20	30	0
Friday	10	20	10	30	0

Subtracting the minimum element of each column from all elements of that column, we get the following matrix.

	Leasing	Portfolio Management	Private Mutual funds	Swaps and options	Dummy
Monday	40	20	50	0	0
Tuesday	30	10	30	0	0
Wednesday	50	0	20	0	0
Thursday	20	10	10	0	0
Friday	0	0	0	10	0

The minimum number of lines to cover all zeros is 4, which is less than the order of the matrix (i.e., 5), the above matrix will not give the optimal solution. Subtract the minimum uncovered element (i.e., 10) from all uncovered elements and add it to the elements lying on the intersection, we get the following matrix:

	Leasing	Portfolio Management	Private Mutual funds	Swaps and options	Dummy
Monday	30	20	40	0	0
Tuesday	20	10	20	0	0
Wednesday	40	0	10	0	0
Thursday	10	10	0	0	0
Friday	0	10	0	20	10

Since the minimum number of lines to cover all zeros is 5, which is equal to order of the matrix, the above matrix will give the optimum solution which is given below:

Leasing portfolio Private Swaps and management mutual funds options Dummy

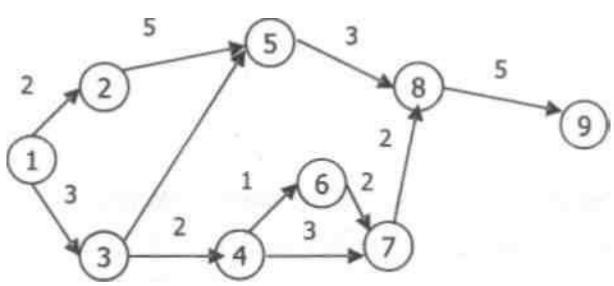
Monday	30	20	40	$\boxed{0}$	0
Tuesday	20	10	20	10	0
Wednesday	40	$\boxed{0}$	10	0	$\boxed{0}$
Thursday	10	10	$\boxed{0}$	10	0
Friday	$\boxed{0}$	10	0	20	10

The optimal schedule is:

Day	Contemporary topics	No. of students missing
Monday	Swaps and options	20
Tuesday	No seminar	0
Wednesday	Portfolio	20
Thursday	Private mutual funds	20
Friday	Leasing	10
	Total	70

Thus number of students, who will be missing at least one seminar is 70.

Answer to Question No. 18:



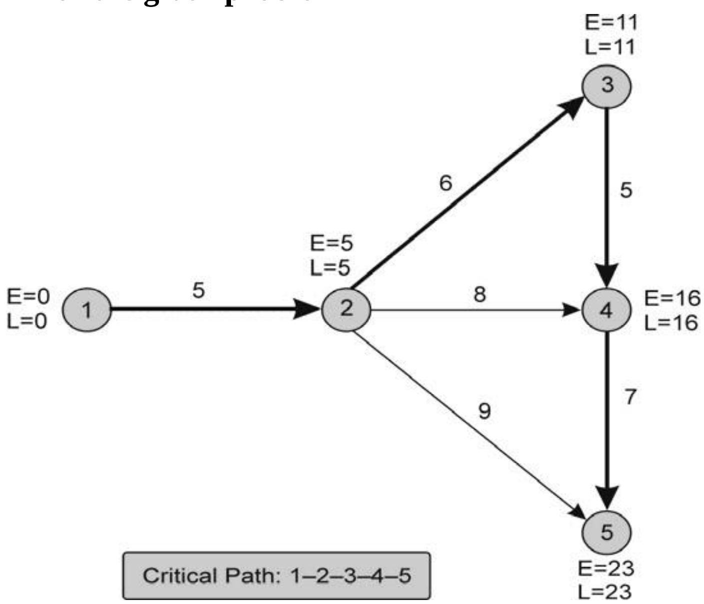
Path	1-2-5-8-9	1-3-5-8-9	1-3-4-6-7-8-9	1-3-4-7-8-9
Path No.	I	II	III	IV
Duration	2+5+3+5 = 15 weeks	3+0+3+5 = 11 weeks	3+2+1+2+2+5 = 15 weeks	3+2+3+2+5 = 15 weeks

The different ways of reducing the Project Duration by four weeks are –

1. Reduce duration of Activity 8- 9 by 4 weeks (presently 5 weeks), since this is a common activity on all Paths.
2. Reduce duration of Activity 1- 3 (Common for Paths II, III and IV), and any one of Activities 1 - 2 and 2- 5 (on Path I) such that total time reduction is 4 weeks.
3. Reduce duration of Activity 3-4 or 7- 8 (Common for Paths III & IV), and Activity 5-8 (Common for Paths I & II).

Answer to Question No. 19:

(i) The network for the given problem



Normal Duration = 23 Days

Associated Cost = Rs.5,70,000

(Refer Statement Showing Project Cost & Duration)

(ii) Lowest Cost = Rs. 5,42,000

Associated Time = 20 Days

(Refer Statement Showing Project Cost & Duration)

Lowest Time = 17 Days

Associated Cost = Rs. 5,79,000

(Refer Statement Showing Project Cost & Duration)

Workings:

Statement Showing Project Cost & Duration

Project Length Days	Job Crashed	Crashing Cost	Normal Cost	Indirect Cost	Penalty	Total Cost
23	–	–	Rs.4,10,000	Rs.1,15,000 (Rs.5,000 × 23 Days)	Rs.45,000 (Rs.15,000 × 3 Days)	Rs.5,70,000
22	1–2	Rs.10,000 (Rs.10,000 × 1 Day)	Rs.4,10,000	Rs.1,10,000 (Rs.5,000 × 22 Days)	Rs.30,000 (Rs.15,000 × 2 Days)	Rs.5,60,000
20	2–3	Rs.32,000 (Rs.10,000 + Rs.11,000 × 2 Days)	Rs.4,10,000	Rs.1,00,000 (Rs.5,000 × 20 Days)	Rs.0 (Rs.15,000 × 0 Days)	Rs.5,42,000
18	4–5	Rs.66,000 (Rs.32,000 + Rs.17,000 × 2 Days)	Rs.4,10,000	Rs.90,000 (Rs.5,000 × 18 Days)	Rs.0 (Rs.15,000 × 0 Days)	Rs.5,66,000
17	3–4	Rs.84,000 (Rs.66,000 + Rs.18,000 × 1 Day)	Rs.4,10,000	Rs.85,000 (Rs.5,000 × 17 Days)	Rs.0 (Rs.15,000 × 0 Days)	Rs.5,79,000

Statement Showing Cost Slope of *each activity*

Activity	Normal		Crash			Cost Slope	s
	Duration (Days)	Cost (Rs.)	Duration (Days)	Cost (Rs.)	ΔT (Days)	ΔC (Rs.)	ΔC/ΔT (Rs.)
1-2	5	30,000	4	40,000	1	10,000	10,000
2-3	6	48,000	4	70,000	2	22,000	11,000
2-4	8	1,25,000	7	1,50,000	1	25,000	25,000
2-5	9	75,000	6	1,20,000	3	45,000	15,000
3-4	5	82,000	4	1,00,000	1	18,000	18,000

4-5	7	50,000	5	84,000	2	34,000	17,000
Total		4,10,000					

Answer to Question No. 20:

(a) Backflushing is a theoretically elegant solution to the complexities of assigning costs to products and relieving inventory, but it is difficult to implement. Backflush accounting is subject to the following problems:

- **Requires an accurate production count-** The number of finished goods produced is the multiplier in the backflush equation, so an incorrect count will relieve an incorrect amount of components and raw materials from stock.
- **Requires an accurate bill of materials-** The bill of materials contains a complete itemization of the components and raw materials used to construct a product. If the items in the bill are inaccurate, the backflush equation will relieve an incorrect amount of components and raw materials from stock.
- **Requires excellent scrap reporting-** There will inevitably be unusual amounts of scrap or rework in a production process that are not anticipated in a bill of materials. If you do not separately delete these items from inventory, they will remain in the inventory records, since the backflush equation does not account for them.
- **Requires a fast production cycle time-** Backflushing does not remove items from inventory until after a product has been completed, so the inventory records will remain incomplete until such time as the backflushing occurs. Thus, a very rapid production cycle time is the best way to keep this interval as short as possible. Under a backflushing system, there is no recorded amount of work-in-process inventory.

Backflushing is not suitable for long production processes, since it takes too long for the inventory records to be reduced after the eventual completion of products. It is also not suitable for the production of customized products, since this would require the creation of a unique bill of materials for each item produced.

(b) Characteristics of Re-engineering Process:

(i) Several jobs are combined into one

(ii) Often workers make decisions

(iii) The steps in the process are performed in a logical order

(iv) Work is performed, where it makes most sense

(v) Quality is built in.

(vi) Manager provides a single point of contact

(vii) Centralized and decentralized operations are combined.

Seven Principles of Business Process Re-engineering (BPR):

(a) Processes should be designed to achieve a desired outcome rather than focusing on existing tasks.

(b) Personnel who use the output from a process should perform the process

(c) Information processing should be included in the work, which produces the information

(d) Geographically dispersed resources should be treated, as if they are centralized

(e) Parallel activities should be linked rather than integrated

(f) Doers should be allowed to be self-managing

(g) Information should be captured once at source.

(c) The following are the contrasting features of Lean Accounting and Traditional Standard Costing:

Lean Accounting	**Traditional Standard Costing**
Quick, simple, and timely	Complex and wasteful processes
Clear and easy to understand	Difficult for people to understand
Provides information for effective decisions	Leads to bad decisions
Supports value stream measurements and box scores	Supports measurements that undermine lean endeavours
Supports a value stream (total process) approach	Supports a departmental view of production
Enables value stream financial control and improvement	Narrows the focus of financial control and improvement
Enables inventory valuation	Enables inventory valuation
Enables value based pricing	Enables Cost + Pricing

(d) It is possible that the organisation is led to Total Quality Paralysis, instead of improvement, by improper implementation of TQM. To avoid such disruption and paralysis the following principles (called the four P's) of TQM should be followed:

The 4P's	
People	To avoid misdirection, TQM teams should consist of team spirited individuals who have a flair for accepting and meeting challenges. Individuals who are not ideally suited to the participatory process of TQM, should not be involved at all, e.g. lack of enthusiasm, nonattendance at TQM meetings, failure to complete delegated work, remaining a "Mute Spectator" at TQM meetings, etc.
Process	It is essential to approach problem-solving practically and to regard the formal process as a system designed to prevent participants from jumping to conclusions. As such, it will provide a means to facilitate the generation of alternatives while ensuring that important discussion stages are not omitted.

Problem	Problems need to be approached in a systematic manner, with teams tackling solvable problems with a direct economic impact, allowing for immediate feedback together with recognition of the contribution made by individual participants.
Preparation	Additional training on creative thinking and statistical processes are needed in order to give participants a greater appreciation of the diversity of the process. This training must quickly be extended beyond the immediate accounting circle to include employees at supervisory levels and also who are involved at the data input stage.

(e) Usefulness of Pareto Analysis: It provides the mechanism to control and direct effort by fact, not by emotions. It helps to clearly establish top priorities and to identify both profitable and unprofitable targets. Pareto analysis is useful to:

(i) Prioritize problems, goals, and objectives to Identify root causes.

(ii) Select and define key quality improvement programs.

(iii) Select key customer relations and service programs.

(iv) Select key employee relations improvement programs.

(v) Select and define key performance improvement programs.

(vi) Maximize research and product development time.

(vii) Verify operating procedures and manufacturing processes.

(viii) Product or services sales and distribution.

(ix) Allocate physical, financial and human resources.

Answer to Question No. 20:

a) Six sigma has two key methodologies: DMAIC and DMADV, both inspired by W. Edwards Deming‘s Plan-Do-Check-Act Cycle: DMAIC is used to improve an existing business process, and DMADV is used to create new product or process designs for predictable, defect-free performance.

DMAIC

- Basic methodology consists of the following five (5) steps:
- Define the process improvement goals that are consistent with customer demands and enterprise strategy.
- Measure the current process and collect relevant data for future comparison.
- Analyze to verify relationship and causality of factors. Determine what the relationship is, and attempt to ensure that all factors have been considered.
- Improve or optimize the process based upon the analysis using techniques like Design of Experiments.
- Control to ensure that any variances are corrected before they result in defects. Set

up pilot runs to establish process capability, transition to production and thereafter continuously measure the process and institute control mechanisms.

DMIADV

Basic methodology consists of the following five steps:

- ♦ Define the goals of the design activity that are consistent with customer demands and enterprise strategy.
- ♦ Measure and identify CTQs (critical to qualities), product capabilities, production process capability, and risk assessments.
- ♦ Analyze to develop and design alternatives, create high-level design and evaluate design capability to select the best design.
- ♦ Design details, optimize the design, and plan for design verification. This phase may require simulations.
- ♦ Verify the design, set up pilot runs, implement production process and handover to process owners.

Some people have used DMAICR (Realize). Others contend that focusing on the financial gains realized through Six Sigma is counter-productive and that said financial gains are simply byproducts of a good process improvement.

b) **Introduction:** The initial VE review may not be complete and perfect in all cost aspects.

There may be further chances of waste reduction, cost and time reduction and product improvement. Such continuous cost reduction technique is called as kaizen costing.

The review of product costs under the target costing methodology is not reserved just for the period up to the completion of design work on a new product. There are always opportunities to control costs after the design phase is completed, though these opportunities are fewer than during the design phase.

Meaning: kaizen costing refers to the ongoing continuous improvement program that focuses on the reduction of waste in the production process, thereby further lowering costs below the initial targets specified during the design phase. it is a Japanese term for a number of cost reduction steps that can be used subsequent to issuing a new product design to the factory floor.

Process of Kaizen Costing: activities in kaizen costing include elimination of waste in production, assembly, and distribution processes, as well as the elimination of unnecessary work steps in any of these areas. Thus kaizen Costing is intended to repeat many of the value engineering steps, continuously and constantly refining the process, thereby eliminating out extra costs at each stage.

Kaizen Costing Vs Value Engineering: cost reductions resulting from kaizen costing are much smaller than those achieved with value engineering. But these are still significant since competitive pressures are likely to force down the price of a product over time, and any possible cost savings allow a Company to still attain its targeted profit margins.

Multiple Versions of Products - Continuous Kaizen Costing: multiple improved versions of products can be introduced to meet the challenge of gradually reducing costs and prices.

The market price of products continues to drop over time, which forces a company to use both target and kaizen costing to reduce costs and retain its profit margin.

c) Value analysis (VA) or Value engineering (VE) is a function-oriented, structured, multidisciplinary team approach to solving problems or identifying improvements. the goal of any VA study is to:

-improve value by sustaining or improving performance attributes
(of the project, product, and/or service being studied)
-while at the same time reducing overall cost
(including lifecycle operations and maintenance expenses).
Value Analysis can be defined as a process of systematic review that is applied to existing product designs in order to compare the function of the product required by a customer to meet their requirements at the lowest cost consistent with the specified performance and reliability needed.
This is a rather complicated definition and it is worth reducing the definition to key points and elements:

(i) Value analysis (and Value engineering) is a **systematic, formal and organized process of analysis and evaluation**. It is not haphazard or informal and it is a management activity that requires planning, control and co-ordination.
(ii) The analysis concerns the **function of a product** to meet the demands or application needed by a customer to meet this functional requirement the review process must include an understanding of the purpose to which the product is used.
(iii) Understanding the **use of a product** implies that specifications can be established to assess the level of fit between the product and the value derived by the customer or consumer.
(iv) To succeed, the **formal management process must meet these functional specification** and performance criteria consistently in order to give value to the customer.
(v) In order to yield a benefit to the company, the formal review process must result in a **process of design improvements** that serve to lower the production costs of that product whilst maintaining this level of value through function.

d) Characteristics of Re-engineering Process

(i) Several jobs are combined into one
(ii) Often workers make decisions
(iii) The steps in the process are performed in a logical order
(iv) Work is performed, where it makes most sense (v) Quality is built in.
(v) Manager provides a single point of contact
(vi) Centralized and decentralized operations are combined.

e) **Socio Economics** (also known as **social economics**) is the social science that studies how economic activity affects and is shaped by social processes. In general, it analyzes how societies progress, stagnate, or regress because of their local or regional economy, or the global economy.

Socioeconomics is sometimes used as an umbrella term with different usages. The term "social economics" may refer broadly to the use of economics in the study of society.

In many cases, socioeconomics focus on the social impact of some sort of economic change. such changes might include a closing factory, market manipulation, the signing of international trade treaties, new natural gas regulation, etc. such social effects can be wide-ranging in size, anywhere from local effects on a small community to changes to an entire society. examples of causes of socioeconomic impacts include new technologies such as cars or mobile phones, changes in laws, changes in the physical environment (such as increasing crowding within cities), and ecological changes (such as prolonged drought or declining fish stocks). these may affect patterns of consumption, the distribution of incomes and wealth, the way in which people behave (both in terms of purchase decisions and the way in which they choose to spend their time), and the overall quality of life.

Companies are increasingly interested in measuring socio-economic impact as part of maintaining their license to operate, improving the business enabling environment, strengthening their value chains, and fuelling product and service innovation.

Section 3: Exam tips to students:

Tip 1. Understand the Syllabus:
Understanding the syllabus in depth is the foundation of your exam preparation. It's essential to know what specific topics will be covered in the exam. This involves not only reading the syllabus but also grasping the depth and breadth of each topic. Some topics may be more heavily weighted than others, so prioritize your study time accordingly.

Tip 2. Organize Your Study Space:
Creating an organized study space is crucial for maintaining focus and productivity. Ensure that your study environment is free from distractions, well-lit, and comfortable. Having all your study materials within arm's reach, including textbooks, notebooks, and stationery, eliminates the need for frequent interruptions and keeps you in a study mindset.

Tip 3. Create a Study Schedule:
A study schedule is a roadmap that guides your preparation. It should be specific, realistic, and tailored to your strengths and weaknesses. Allocate sufficient time to each topic based on its complexity and your familiarity with it. Setting clear goals for each study session helps you measure your progress and stay motivated.

Tip 4. Review Lecture Notes and Textbooks:
Reviewing lecture notes and textbooks is fundamental to mastering the course material. Go through your class notes or self-study books systematically, ensuring that you understand the concepts discussed during lectures. While reading textbooks, actively engage with the material by highlighting key points and creating concise summaries or flashcards for quick revision.

Tip 5. Practice Problems:
Cost and Management Accounting often involve numerical calculations and problem-solving. Practice is essential to become proficient in applying concepts. Start with basic problems and gradually move to more complex ones. Work on a variety of problems to ensure a comprehensive understanding of different scenarios and calculations.

Tip 6. Use Additional Resources:
Sometimes, you may encounter topics that are challenging to grasp from your primary materials. In such cases, don't hesitate to seek out additional resources. Online tutorials, other Institute's material, video lectures, or study guides can provide alternative explanations and examples that might resonate better with your learning style.

Tip 7. Study in Groups:
Studying in groups can be highly beneficial. Explaining concepts to others and engaging in discussions can reinforce your understanding. It also allows you to learn from your peers, as they may have different insights and approaches to solving problems. Collaborative learning can be particularly useful for challenging topics.

Tip 8. Past Papers and Sample Exams:
Past exam papers and sample exams are invaluable resources for exam preparation. They provide insight into the format, structure, and types of questions that you can expect on the actual exam.

Solving these papers under timed conditions helps you practice time management and refine your exam strategy.

Tip 9. Time Management:
Effective time management during the exam is crucial. Allocate a specific amount of time to each section or question based on its weight and complexity. Stick to your time allocations to ensure you have ample time to address all questions. If you get stuck on a particular question, make a note to return to it later rather than dwelling on it excessively.

Tip 10. Take Breaks:
Studying for extended periods without breaks can lead to burnout and reduced productivity. Schedule short, regular breaks during your study sessions. These breaks provide an opportunity to recharge, clear your mind, and maintain focus when you return to your studies. A balanced study-rest cycle is more sustainable in the long run.

These tips, when followed diligently, can significantly enhance your preparation for a Cost and Management Accounting exam. Remember that consistent effort, effective study techniques, and a well-structured plan are the keys to achieving success in your exams.

Paper 8 - Strategic Management and Decision Making Analysis

Questions

Concept of Strategy

Question No. 1

Elaborate the concept and characteristics of strategy.

Question No. 2

Why strategy is relevant to professional accountants? Explain in brief.

Strategic Management

Question No. 3

Define strategic management. How would you sell strategic planning to the directors of the board of your organization who do not see the need for it?

Question No. 4

"Businesses which use strategic management have a higher probability of success than those which do not." How would you respond to this statement?

Environmental Analysis

Question No. 5

Discuss various elements of external environment.

Question No. 6

"Combination of corporate analysis and environmental analysis is SWOT analysis" Explain.

Internal Analysis

Question No. 7

What steps need to be followed to identify core competencies of a business firm?

Question No. 8

"Success of strategic management depends on how well the organization uses its internal resources." Explain.

Strategic Options

Question No. 9

Why are enterprises, especially in fast changing industries, making strategic alliances a core part of their overall strategy?

Question No. 10

Why should a business choose differentiation strategy? What are the capabilities a firm should possess to support a differentiation-based strategy?

Strategy Formulation and Strategic Choice

Question No. 11

What is Portfolio Analysis? Discuss the GE Business Screen that supports to analyse market and competitive position of a business.

Question No. 12

"Strategic choice is made in the context of decision situation." Explain this in the context of various factors affecting strategic choice.

Strategy Implementation

Question No. 13

"Strategy implementation is all about ensuring a fit between strategy and structure, resource, leadership, policies, etc." Elaborate this statement.

Question No. 14

What is business process reengineering (BPR)? What steps would you recommend implementing BPR in an organization?

Strategy Evaluation

Question No. 15

Explain the concept of strategy evaluation. Describe various types of strategy.

Role of Chief Executive in Strategy

Question No. 16

Define strategic leadership. What is its importance as a potential source of competitive advantage?

Decision Making Process and Techniques

Question No. 17

What is the significance of strategic decisions in strategic management? Explain the differences between strategic decisions and operational decisions.

Project Management

Question No. 18

What is project planning? What control process would you suggest for making the project successful? Explain.

Strategic Management and Decision Making Practices in Nepal

Question No. 19

Describe the trends of strategic orientation in Nepalese organizations.

Case Study

Question No. 20

Zingkai Inc (ZI), headquartered in South Korea is one of the 10 best software companies in the world. Its Zii program, one of the famous products, enables organizations to easily receive specific information from massive amounts of computerized data, like airline reservation, inventories, cash and credit transactions. In one Computer World survey of database management, Zii received the highest user satisfaction ratings.

ZI has also established a subsidiary firm in Nepal in consideration of emerging markets in India and China. The target market of the company is very competitive as both the countries already have excellent software companies. ZI adopted employee stock program. The primary reason behind it was to increase the employee commitment towards the company. Work pattern in the subsidiary is quite similar to other subsidiaries in rest of the world. The employees dress as specified and work 10 hours a day. The company gives its technical staff the responsibility needed to develop software. While many of the software developers are Nepali, there are Korean, American and Indian staff as well.

The employee culture is distinct in the company. The Korean employees prefer to spend more time in the company and work for about 14 hours a day. Americans do not like to work more hours than the specified hours per week. Nepalese are flexible in working hours and spend time talking on personal matters including national politics. The company operation has three different work patterns and culture.

Foreign employees have work permit but they are not clear about getting permission from the government for holding stock. The company has already completed three years of its operations in Nepal. Procedural complexities have been noticed in case of employee stock program. The Managing Director has sensed that some technical employees do not want to work with conflicting work patterns and culture.

Questions:

a) Identify and explain three critical issues confronting the subsidiary of Zingkai Inc. in Nepal.

b) What strategy would you recommend to solve the critical issues?

Answer No. 1

The concept of strategy is central to understanding the process of strategic management. Undoubtedly, strategy is one of the most significant concepts emerged in the subject of management studies in recent past. It has been emerged as a critical input to organizational success and has come in handy as a tool to deal with the uncertainties that organizations face. It has helped to reduce ambiguity and provide a solid foundation as a theory to conduct business. It is a convenient way to structure the many variables that operate in the organizational context and to understand their interrelationship.

A strategy is an integrated plan or course of action or a set of decision rules forming a pattern or creating a common thread. The pattern or the common thread is related to the organization's activities that are derived from its policies, objectives and goals. It is related to pursuing those activities, which move an organization from its current position to desired future state. It is concerned with the resources necessary for implementing a plan or following a course of action and connected to the strategic positioning of a firm, making tradeoffs between its different activities and creating a fit among these activities.

Igor Ansoff explained the concept of strategy as the common thread among the organization's activities and product-markets that defines the essential nature of business that the organization**.** Strategy consists of the following characteristics:

1. **Long-term Horizon:** Strategy is concerned with the long-term direction and scope of the organization. It is forward looking at least for one decade. Top management as a long-term blueprint of the organization formulates it.
2. **Action oriented:** Strategy is concerned with broad action plans. The action plans aim at objectives achievement. It is more specific than objectives and integrated.
3. **Value addition:** Strategy aims at adding value. It seeks customer satisfaction. It is the bridge that matches the resources and capabilities of organization with opportunities. It seeks customer satisfaction.
4. **Strategic decisions:** Strategy is based on strategic decisions. Strategic decisions define the scope of the organization's activities. They pinpoint organizational capabilities and product/ market scope.
5. **Environmental adaptation:** Strategy matches the resources and activities of the organization to the changing forces in the environment. It aims for strategic fit by matching resources with opportunities. It is dynamic and flexible.
6. **Stakeholders' expectations:** Stakeholders can be suppliers, customers, labour unions, financial institutions, employees and even owners. They have interest in the performance of the organization. Strategy fulfills the values and expectations of the stakeholders of the organization.

Answer No. 2

Strategy provides a central purpose and direction to the activities of the organization and to the people who work in it, and often to the world outside. In fact, it is as important to inform the public or the market about the company’s strategy as it is to inform inside the organization. The strategy must be communicated to suppliers, wholesalers, creditors, and customers if their cooperation is to be gained. It is very relevant to professional accountants. An organization must recognize these groups, even while it is establishing its strategy. This is particularly true of the customer and market, since in the final analysis, it is the market that success or failure materializes. The business and its professional accountants must continually be aware of market changes and developments if they are to remain in the most advantageous competitive posture. "What is our business?" is not determined by the producer but by the consumer. In essence, what business or even what industry a company is in, is not determined by its product or service alone. It is more clearly designated by its product-market Also included would be the direction of growth, the basic means by which it will compete, and the way in which all aspects of its strategy fit together and support one another. This articulation of strategy will answer the question of what business the company is in. As Peter Drucker has pointed out, the failure to ask the question is clearly the most important single cause of business failure. These are the reasons for the professional accountants to acquaint themselves with strategy.

Answer No. 3

Strategic management is defined as the set of decisions and actions that result in the formulation and implementation of plans designed to achieve a company’s objectives. It involves the planning, directing, organizing, and controlling of a company’s strategy-related decisions and actions.

The directors must be explained the benefits and importance of strategic planning. The following benefits should be explained to them:

- A strategic plan will be produced that will serve as the basis for the development of operational planning on an annual basis.
- The strategic plan will identify critical challenges facing the organization over the next few years and strategies to meet those challenges.
- Managers at all levels of the firm interact in planning and implementing. As a result, the behavioral consequences of strategic management are similar to those of participative decision making.
- Strategic planning will clarify the organization’s competitive advantage in its market place.
- The strategic planning process results in better decisions because group interaction generates support, enthusiasm and a greater variety of strategies.
- The involvement of employees in strategy formulation improves their understanding of the productivity-reward relationship in every strategic plan and, thus, heightens their motivation.
- Resistance to change is reduced.

A good question to post is “What happens if we do not do any planning for the future?” The mentioned are some of the benefits that can be discussed to the directors.

Answer No. 4

There are many reasons for this proposition. Some of them are as follows:

Strategic management is one way to systematize the most important business decisions. Business involves risk taking, and strategic management attempts to provide data so that reasonable and informed gambles can be made when necessary.

Strategic management helps educate managers to become better decision makers. It helps managers to solve the problems of a company.

Strategic management helps improve corporate communication, coordination among projects, allocation of resources, and budgeting.

Strategic management focuses on business problems, not just functional problems of marketing or financial nature. Strategic management helps build knowledge and develops the attitudes necessary for becoming a successful business practitioner.

Successful companies are successful for many reasons, such as good people, good products and services, and strategic management practices.

Answer No. 5

There are large numbers of factors which affect the organization in each sector of the environment. In its working, the organization interacts with different factors and forces. Those forces lying outside of the organization are commonly known as external environment. The external environment is beyond the direct influence and control of the organization but it exerts powerful influence over its functioning. Before an organization begins strategy formulation, it must scan the external environment to identify possible opportunities and threats.

The general environmental forces are external variables. The general environmental forces have an important effect in determining the resources available for inputs and processes. Various characteristics of such factors may be favorable or unfavorable for the growth of the organization. The various elements of general environment can be classified as political, economic, socio-cultural, technological and demographic. The political environment includes such factors as the general state of political development, the degree of politicization of business, the law-and-order situation, political stability, the political ideology and practices of the ruling party, the efficiency of government agencies, the extent and nature of governmental intervention in the economy.

The economic environment includes general economic situation in the nation and conditions in resource markets. Fiscal and monetary policy of the government, interest rates, devaluation and evaluation of the currency in relation to other currencies, balance of payment and inflationary or deflationary trend are the elements of economic environment. Socio-cultural environment consists of factors related to human relationships and impact of social attitudes and cultural values. The technology and business are highly interrelated. Demographic factors are age profile, sex ratio and population growth rate.

The task environment includes those elements or groups that directly affect the organization and in turn, are affected by it. These are suppliers, competitors, customers, creditors, special interest groups and communities. An organization's task environment is typically the industry within which that firm operates. An industry can be conceived of as a set of firms which are in competition with one another for customers for their goods and services and which rely upon others for supply of critical inputs. Customers have their own needs, desires or requirements. It might be affected by demographic and geographic elements. As suppliers provide capital, labor and materials it affects the cost. New entrants and substitutes are elements that affect competitive environment. Thus, various elements constitute external environment.

Answer No. 6

Combination of corporate analysis and environmental analysis is SWOT analysis (strengths, weaknesses, opportunities, threats) which is undertaken as an integrated process in strategic management. The basic objectives of SWOT analysis is to provide a framework to reflect on the organizational capabilities to avail opportunities or to overcome threats presented by the environment. In fact, the dimensions of organizational capabilities have relevance in so far as they relate to the environmental conditions.

SWOT analysis provides a logical framework for systematic discussion of various issues bearing on the business situation, generation of alternatives strategies, and finally the choice of strategy. SWOT analysis presents the information about internal and external environment in structured form whereby key external opportunities and threats can be compared systematically with internal capabilities and weaknesses. Thus, organization's external and internal situation can be matched so as to form distinct patterns and strategy can be chosen on the basis of these patterns. These patterns may in the form of the following:

i) High opportunities and high strengths

ii) High opportunities and low strength

iii) High threats and high strengths

iv) High threats and low strengths

Naturally, in all these situations, different strategies are suitable, for example, in the case of first situation, while aggressive growth strategy may be suitable, defensive strategy like divestment may be suitable in fourth situation.

Answer No. 7

To identify core competences, the following steps are generally followed:

- Brainstorm the factors that are important to firm's clients.
- Identify the factors that influence people's purchase decisions. Brainstorm the factors that customers use in assessing the firm's performance and services.
- Identify the competences that lie behind them. If customers value small products (e.g. cell phones), then the competence they value may be "component integration and miniaturization".
- Brainstorm existing competences and the things the firm does well.
- Prepare a list of factors that are important to clients, screen them using these tests to see if the firm could develop these as core competences.
- Review the list in the following ways:
    - If the firm has identified core competences that it already has, then great! Work on them and make sure that the firm builds them as far as possible.

- If the firm has no core competences, then look at ones that the firm could develop, and work to build them.

Answer No. 8

Strategic management must place realistic requirements on organizational resources. It should match opportunities of competitive advantage with availability of resources. Forces in the internal environment consist of organizational goals, organizational structure, organizational resources and organizational culture. These forces are controllable by the organization. So the organization should know how to use these elements. Corporate resource availability should be carefully analyzed to identify strengths and weaknesses. Strength is something an organization does well in relation to competitors. It provides capability. It arises from resources and competencies. It can be expertise of human resources, distinctive product, strong brand, superior technology or better customer service. An organization is a bundle of resources and organizational activities are based on deployment of resources.

It is necessary to go through the internal analysis to use internal resources in best way possible by the organization. Marketing resources, human resources, production resources, financial and accounting resources are key areas of internal analysis. Value chain analysis, cost efficiency analysis, effectiveness analysis and comparative analysis are the methods used for internal analysis. A value chain is a set of interlinked value creating activities, which begin with inputs, go through processing, and continue up to outputs marketed to customers. If this method is used, identification of separate activities to produce, market and deliver become easy and use of resources can be made at its best. Cost efficiency is a measure of the level of resources needed to create a given level of value. Organizations must deliver value to customers to get success. Successful organization provides the product features valued by customers that require ability to operate effectively. Effectiveness analysis assesses how well an organization is matching its products and services to the requirements of target customers. The ability of the organization to meet and beat the performance of competitors can lead to success and comparative analysis is concerned with assessing the performance of an organization from a comparative perspective.

Resources have strategic importance so it should be assessed as available resources, threshold resources and unique resources. The organization should always take in mind that the capability factors that reside in people and other internal functions. Core competencies are skills in coordinating resources for productive use and organizational success.

Answer No. 9

The primary reason why firms enter into strategic alliances is to enhance their organizational capabilities and thereby gain competitive or strategic advantage. For this to happen, they continually strive to gain access to new markets and new supply sources. They also wish to become more profitable by using the latest technology and making optimum utilization of resources. When the firms find that it is not feasible to either create resources internally or to acquire them; they rely on strategic alliances to create a network of beneficial relationships. There are different reasons for use of strategic alliances. They are:

i. **Entering new markets**

   A company that has a successful product or service may wish to look for new markets. Doing so on one’s own capabilities may seem to be difficult. This is especially true in case a company wishes to explore foreign markets. Here, it is better to enter into a partnership with a local firm which understands the market better. This is one of the reasons why multinational corporations have entered into strategic alliances with developing countries

ii. **Reducing Manufacturing Costs**

Strategic alliances are used to pool resources to gain economic scale or make better utilization of resources in order to reduce manufacturing costs. This is especially true of precompetitive alliances where a long-term relationship is developed with suppliers and buyers.

iii. **Developing and diffusing technology**

Strategic alliances may be used to develop technological capability by leveraging the technical expertise of two or more firms, an act which may be difficult to perform if these firms act independently. Strategic cooperation is a much –favored approach for new technological development. Whenever industries are experiencing high- velocity technological change in many areas simultaneously, firms find it virtually essential to have cooperative relationships with other enterprises to stay on the leading edge of technology and product performance in their own area of specialization.

Answer No. 10

Differentiation requires that the business have sustainable advantages that allow it to provide buyers with something uniquely valuable to them. Differentiation is a business strategy that seeks to build competitive advantage with its product or service by having it to be "different" from other available competitive products. A successful differentiation strategy allows the business to provide a product or service of perceived higher value to buyers at a "differentiation cost" below the "value premium" to the buyers. In other words, the buyer feels the additional cost to buy the product or service is well below what the product or service is worth compared with available alternatives.

The following are the skills and capabilities a firm should possess to support a differentiation-based strategy:

- Strong marketing abilities
- Product engineering
- Corporate reputation for quality
- Product features maintaining a "distinct" image of the product
- Technical competence of staff and a marketing orientation of service personnel.
- Informative advertisement and promotion
- Tradition of closeness to key customers
- Strong cooperation from channels

Answer No. 11

Portfolio analysis aids to develop corporate strategy in a multi business corporation. In this analysis, top management view its product lines and business units as a series of investments from which it expects a profitable return. From a portfolio analysis, the top management constantly judge to ensure the best return on the corporations invested money. Following are the most popular portfolio analysis.

- BCG matrix
- GE's Business screen
- Hofer's product market evolution matrix, etc.

GE Business Screen /GE Nine-Cell Matrix

GE Nine cell matrix has been developed to overcome the limitations of four-cell matrix. This concept was created by General Electric planners and the consulting firm McKinsey and Company, USA. Two dimensions are content in this business serene market attractiveness and competitive position. Market attractiveness refers to all the strengths and resources relating to market such as economics of scale, competitive intensity, customer satisfaction, technology, seasonality etc. Competitive position is a composite of several factors such as marketing, organization, customer loyalty, research and development, product quality, service etc. In this business screen, both market attractiveness and competitive positions are classified into high, medium and low. The GE nine-cell grid suggests three basic strategic approaches in the corporate portfolio depending on its location within the grid:

a. invest to grow,

b. invest selectively and manage for earnings, and

c. harvest or divest for resource.

The resource allocation decisions remain quite similar to those in the BCG matrix. These businesses would be accorded resources to pursue growth oriented strategies. Business classified in the harvest/divest category would be managed like the dogs in the BCG matrix. They would follow strategies that provided net resources for use in other business units. Business classified in the selectivity/earnings category would either be managed as cash cow (providing maximum earnings for corporate wide use) or as question marks (selectivity chosen for investment or divestment).

Following figure shows business screen of nine cell model suggested by General Electric Company and the factors are pointed out to be analysed while determining market attractiveness and competitive position.

Business Screen/ Nine Cell Matrix

The nine-cells of GE matrix can be divided into three zones. The three cells in the upper left corner indicate strong SBUs in which the company should invest or grow. The diagonal cells stretching from the lower left to the upper right indicate SBUs that are medium in overall attractiveness. In these SBUs, the company should pursue selectivity and manage for earnings. The three cells in the lower-right corner indicate SBUs that are low in overall attractiveness. The company should give serious thought to harvesting/diverting these companies.

Answer No. 12

The process of strategic choice is essentially a decision making process. Decision making process consists of setting objectives, generating alternatives, choosing one or more alternatives that will help the organization achieve its objectives in a best possible manner. For making a choice from among the alternatives, a decision maker has to set certain criteria on which to accept or reject alternatives. These criteria are the selection factors. They act as guides to decision making.

The existence of different modes of choice process suggests that universality in the process cannot be expected. Therefore, managers may go through their strategic choice depending on various decision contexts. From the point of view, organization's mission, nature of environment, organization's strength and weaknesses and organization's past strategies will affect the choice of strategy. However, in actual practice, choices are not governed by these factors alone but various personnel factors also enter into the choice factors. This happens because, in one way, choices are the outcome of the personal preferences of managers, particularly of those who are making decisions. Further the analysis of decision situations may be greatly influenced by personal factors. Such personal factors may be managerial value system, attitude toward risks, and managerial power relationships in the organization. Thus, strategic choice, like any other choice, is made in the context of decision situation and decision maker. Interaction of both these types of factors actually determines what strategy will be chosen.

Factors affecting choice of strategy:

Organizations are deliberate creations and they have mission towards which all efforts are directed. The mission of an organization limits the choice of strategic action because the action should fit with its mission. The organizations start considering strategic alternatives in the light of its business mission. The mission will specify the nature of strategic choice that the managers can take.

The nature of environment affects the way in which strategy choice is made. The strategy is essentially meant to relate the organization with its environment and the best strategy is one which relates the organization with its environment effectively. The managers select strategy depending on the nature of environment.

Personal factors affect the choice of strategy. The strategic choice is an ordering of a kind of personal preferences particularly of top management. When there is a change in management pattern of any organization, there is often a change in strategies because of personal factors of new management. Personal preferences and aspirations, value system of top management, attitude towards risk, and managerial power relationship affect strategic choice.

Value system of top management affects the types of strategy that an organization pursues. Personal preferences and aspirations of key strategists also affect what kind of strategies will be perused by the organization. The choice of strategy depends on the risk taking attitudes of the management, particularly of top management who takes major decisions.

The managers go for their strategic choices in the light of their organizational strength and weaknesses, there by emphasizing strengths and overcoming weaknesses. In fact, the basic objective of strategic choice is to relate the organization with its environment in the light of the strengths and weaknesses.

Past strategies of the organization are the beginning point of strategic choice and may eliminate some strategic choice as a result.

Answer No. 13

Implementation of strategy is the process through which a chosen strategy is put into action. Good strategy with poor implementation or poor strategy with good implementation is likely to lead to problems. Mere choice of even the soundest strategy will not precipitate into organizational activities and accomplishment of its objectives. Strategy formulation requires primarily conceptual and analytical skills and Strategy implementation requires administrative skills. Strategy is the independent variables and organization structure, leadership, functional strategies, resources, etc. are the dependent variables. So, the dependent variables have to be changed and adapted as per strategy. More specifically:-

i) Strategy- organization structure fit

- Appropriate organization structure should be created so that the chosen strategy can be readily implemented and strategic goals can be accomplished.
- Do not assume that every strategy change requires organizational restructuring, as sometimes the existing organization structure might be appropriate for the new strategy.

ii) Strategy-resource fit

- To implement the selected strategy, the necessary human resources, financial resources, infrastructure based resources, informational resources, etc. must be acquired.

- Decisions and actions have to be taken regarding requirement of the quality and quantity of each type of resources necessary for implementing the chosen strategy and determining from where they will be accumulated.
- Once required resources are collected they have to be allocated/reallocated to different SBUs/ departments etc. in line with the chosen strategy.

iii) Strategy-leadership fit

- Appropriate leadership should be present in the organization that will ensure successful implementation of the chosen strategy.
- Either the existing executives may change their leadership style to suit to the chosen strategy or they can be trained to do so. If both is not possible, the existing leaders should be replaced by capable leaders from within or outside the organization who can successfully implement the strategy.

iv) Strategy-SIS fit

- As per the selected strategy, appropriate strategic information system (SIS) should be developed that will monitor strategy implementation process and collect, classify, process, store, and disseminate accurate, complete, and timely information/feedback on its progress on a continual basis.

v) Strategy-management system fit

- General management is the foundation over which the building of strategic management shall be created. Strategic management is not the alternative to general management. In other words, general management is the prerequisite to strategic management.
- For example, 70% of joint ventures during the 1980s failed to meet their objectives due to failure on management's part to set up a sound general management system to implement the strategy.

vi) Strategy-functional plans, policies and strategies fit

- It is necessary to develop appropriate functional plans, policies, and strategies (in line with the selected corporate/SBU strategy) in order to realize the objectives of the strategy chosen.
- Implementing the functional plans, policies, and strategies is a must; otherwise they remain only on papers and cannot contribute to the success of the strategy.
- For this, functional managers should be motivated to carry out the implementation of the revised functional policies.

vii) Strategy and change management

- As per the requirement of the selected strategy, managing strategic change in less painfully and with great enthusiasm is a must.

Answer No. 14

Business Process Reengineering (BPR) 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. It is a management tool for strategy implementation. It is radical redesign of jobs and work processes. It aims to achieve gains in cost, quality, service and speed. It involves change in structure, technology and people. Old policies, rules and procedures are changed. Decentralization and information sharing is done. The focus is changing the ways the work is carried out. The work is designed around products and outputs. It asks: "What is needed if start is made from the scratch." It is concerned with employee and customer well-being. BPR is a revolutionary redesigning of key business processes. BPR involves the following steps:

1. Develop objectives and strategy for reengineering.
2. Ensure strong leadership and commitment by top management for directing reengineering efforts.
3. Ensure employee participation by creating a sense of urgency for reengineering.
4. Start with a clean slate to:
    - Recreate organization structure by organizing around outcomes.
    - Reassess work processes; change old policies, rules, procedures.
    - Link parallel activities.
    - Build cross-functional and self-managed teams.
    - Identify competitive advantage
    - Develop information networks.

Answer No. 15

Strategy evaluation continually assesses the changing environment to uncover events that significantly affect the course of the strategy. Top management exercises strategy evaluation. It is long term oriented. It focuses on external environment. It is proactive and provides early warning about the performance of the strategy. Strategy evaluation involves reexamination of assumptions, measuring performance and appropriate corrective measures. Assumptions made while formulating a strategy may no longer be valid and relevant as the environment is dynamic. So the strategy evaluation takes into account the changing assumptions. Strategy evaluation continually evaluates the implementation performance of a strategy and gaps are identified. Appropriate measures are taken to adjust the strategy with due consideration to changing assumptions and implementation gaps. Strategy evaluation can be strategic and operational.

Strategic evaluation can be of four types: premise evaluation, implementation evaluation, strategic surveillance evaluation and special alert evaluation.

Premise evaluation involves reexamination of the validity of premises to make necessary changes at the right time. It is concerned with keeping track of changes in premises and assessing their impact on strategy implementation.

Implementation evaluation evaluates whether the plans, programmes, projects and budget are guiding the organization towards objective achievement. It involves strategic rethinking.

Strategic surveillance monitors a broad range of events inside and outside the organization, which threaten the course of action. It can be selective surveillance or organizational surveillance.

Special alert control is triggered by detection of a crisis. It provides rapid response through immediate reassessment of strategy during crisis situation.

Operating evaluation controls the allocation and use of resources through performance evaluation of strategic business units. It is a cyclical process of four steps: setting standards of performance, measure actual performance, evaluate performance and taking corrective actions. Standards in the form of planned or budgeted performance are set for implementation. Then actual performance is measured and compared against performance standards. Corrective actions are taken to bring performance in line with the standards.

Answer No. 16

Strategic leadership rests at the top, in particular with the Chief Executive Officer (CEO). Other commonly recognized strategic leaders include members of the board of directors, the top management team, and divisional managers. Regardless of their title and organizational function, strategic leaders have substantial decision-making responsibilities. Top level managers are an important resource for firms to develop and exploit competitive advantage. Strategic leaders must ensure that their firm exploits its core competencies, which are used to produce and deliver products that create value for customers, through the implementation of strategies.

Strategic leadership is the ability to anticipate, envision, maintain flexibility, and empower others to create strategic change as necessary. Multifunctional in nature, strategic leadership involves managing through others, managing an entire organization rather than a functional unit, and coping with change that continues to increase in the competitive landscape. Because of this landscape's complexity and global nature, strategic leaders must learn how to effectively influence human behavior, often in uncertain environments.

The ability to manage human capital may be the most critical of the strategic leader's skills. At present, intellectual capital, including the ability to manage knowledge and create and commercialize innovation, affects a strategic leader's success. The crux of strategic leadership is the ability to manage the firm's operations effectively and sustain high performance over time.

A firm's ability to achieve strategic competitiveness and earn above-average returns is compromised when strategic leaders fail to respond appropriately and quickly to changes in the complex global competitive environment. The inability to respond or to identify the need to respond is one of the reasons that some of the CEOs fail. A firm's long-term competitiveness depends on managers' willingness to challenge continually their managerial frames. Strategic leaders must learn how to deal with diverse and complex competitive situations. To survive, managers do not have to make optimal decisions. They only need to make better decisions than their competitors. They also need to understand how such decisions will affect the internal systems currently in use in the firm. It is thus seen thus every crucial decision of the firm revolves around the strategic leadership. Hence, this leadership is an important potential source of a firm's competitive advantage.

Answer No. 17

Decision making is an indispensable as well as pervasive function of management. Strategic management as believed to be set of decisions actions which have long-run effect on organizational effectiveness obviously requires sound and proper decisions. Decisions having long-run effect are called strategic decisions which are essential in strategic management. The significance of strategic decisions is pervasive as they:-

(i) provide long-run direction to an organization as its focus is far-reaching,

(ii) help in strategy formulation,

(iii) facilitate availability and allocation of resources,

(iv) help to recognize organization's own position and identify opportunities of competitive advantage,

(v) help to boost managerial effectiveness, and

(vi) aid to devise appropriate and sound control mechanism.

Along with the strategic decisions, organizations need to make operational decisions as well. Operational decisions primarily affect day-to-day activities which provide underpinning supports to realize strategic decisions. The distinctions between strategic decisions and operational decisions can be drawn in the ways as:

i. Strategic decisions are of long-term nature whereas operational decisions cover a period of less than one year.
ii. Strategic decisions are big decisions which affect the whole organization or a large part whereas, operational decisions are regular decisions and affect only a part of organization.
iii. Strategic decisions provide scope and direction of business whereas operational decisions are made to smoothen the activities as directed by strategic decisions.
iv. Strategic decisions are made rarely and cannot be reversed easily whereas operational decisions are frequently made and can be reversed or mended.

Answer No. 18

Project planning is concerned with development of project for investment. It identifies and addresses the tasks required for accomplishment of project objectives. It acts as a road map for managing the project. It determines how the project objectives will be accomplished. It involves detail design, budgeting, scheduling and allocation of resources.

Project planning is concerned with looking ahead at the future work plan of a project. It is deciding in advance about: what activities need to be done in the project? How the activities will be done? When the activities are too be done? And who will do the activities? Project planning involves defining project objectives, determining and evaluating alternative courses of actions, and selecting an alternative to achieve objectives. It is estimating, sequencing and scheduling of project work. It is allocation of resources in a coordinated manner. It is planning the project work in a logical and structured manner.

Control is an essential function of project management. It ensures that the right things are done in the right manner and at the right time. Control is a managerial process. It is interrelated with planning. Planning provides standard of control. Control measures actual performance and compares it with standards to identify devastations. Deviations are analyzed to take corrective actions. Thus, the following control process would help to achieve project objectives:

a) *Setting project standard*: Targets are set for each project activity in terms of time, cost, quality, etc. They serve as standards for control. Project planning is used to set such standards.

b) *Performance monitoring*: Actual performance of each project activity is measured against project standards to provide feedback. Project reporting system is the source of such information.

c) *Find performance deviation*: The actual performance is compared with the standards to find out deviations for each activity. The causes and incidence of deviations are analyzed.

d) *Corrective actions:* Corrective actions are taken to improve performance in future period.

This is the essence of project control. It remedies the deviations to keep the system stable. Project control should focus on critical control points in which performance deviations cause the greatest damage to the project. It should find and resolve problems to get the project back on track.

Answer No. 19

Nepalese organizations generally lack long-term strategic orientation. They lack a long-term vision of what they aspire to become. Similarly, they are unclear about why do they exist in terms of mission. Many of them are confused about their future strategic direction and scope. They prepare annual budgets and strictly follow the provisions of the budget. Managers resort to for crisis management and decisions they take depend on the events and situation.

Most organizations have profit as their objectives. They aim at maximizing profit in short term. The growing competition from globalization, together with the growth of big business houses, has made market share an important objective in recent years. The growing presence of global enterprises has made survival an important objective for Nepalese organizations.

Most organizations lack strategic perspective in decision making. This has led to sub-optimization and lack of synergistic effects. Strategic decision-making process is not based on careful development of strategic issues and solution alternatives. Similarly, many organizations lack strategy formulation at corporate and business unit levels.

The growing presence of global enterprises has been gradually bringing consciousness about the importance of strategy in Nepalese organizations to survive in the competitive market.

Answer No. 20

a. Three critical issues confronting the subsidiary of Zingkai Inc. in Nepal can be identified as follows:

   1. **Rapid change in products and product attributes:**
      Zingkai Inc. is doing its business in an industry where change is very common. Software industry has dramatically changed specially in the last two decades. Plant design and layout, office automation, materials and transaction processing, quality control, health care and many other areas have been heavily dependent on software performance. In most of the cases, the software working best yesterday has become questionable today and it is certain that it will be useless tomorrow.

2. **Requirement of human creativity and intelligence:**
   The job of software design in based on creativity which is linked to human being. Strong interest of an individual towards work promotes positive thinking and instills seeds of creativity. Software industry needs high level of human creativity and intelligence. Person who have such level of competency do not want to be associated with a firm for a long period of time. Zingkai Inc. needs to ensure the availability of high caliber people in the firm.
3. **Urgency of promoting compatible work patterns and culture:**

   Zingkai Inc. employs people mostly from South Korea, USA, India and Nepal. It has different work patterns of the individual grown up in different cultures For instance, Korean work for more hours because they love work. American work more hours if their work pays more. Indian and Nepali enjoy talking and take more breaks. The most challenging and serious issue in this company is to make work patterns and culture compatible. As a consequence of incompatible work patterns and culture the company is unable to design and implement employee motivation schemes. The employee stock program has been questionable.

b. The frequency of change in number and nature of software is very high in technology companies like Zingkai Inc. What worked best yesterday is not working best today, and it is likely to disappear tomorrow. Every company involved in software in compelled to address change. Zingkai Inc. needs to rely on new knowledge. Persons having excellent knowledge today may become useless tomorrow. It should hire employees on project basis. As long as the project works, employees would be working with it. The company should keep close surveillance over the plans and programs of its present and future clients in order to track its future course of actions.

Competency of the company heavily depends on human creativity and intelligence. Regular hunt for new knowledge is necessary in order to strengthen its competency in the days ahead. The company should always keep the door open for creative and intelligent people. It should adopt a policy of linking with universities and training institutes around the globe in order to ensure the regular flow of competent people in the company. Job design should be made virtual where employees get to work for the company from their home country. Flexible benefits plan should be promoted as a strong motivator.

Virtual work stations should be developed in order to minimize the negative impact of conflicting work patterns and culture. Office hours should be eliminated. Quality, quantity, as well as deadlines for output should be fixed. Individual contribution should be tailored to team performance. Employee stock program should be replaced by flexible benefits plan.