ANSWERS

CHAPTER 1

Activities

1. Other than the activities discussed above, depending on the requirements of management, the internal audit also performs the following activities:
   - risk management activities, which involve:
     (a) identifying and evaluating significant exposures to risk
     (b) communicating risk and control information to relevant sections of the organisation and to those charged with governance
     (c) contributing to the improvement of risk management and control systems
   - assessing the governance process in its accomplishment of objectives on ethics and values, performance management and accountability
   - performing a special review as required by management, for example, a review of fraud occurring in a certain department within the organisation

Work Them Out

1. A	2. D	3. C	4. B	5. D	6. C	7. B	8. D	9. A	10. D

Short Questions

1. The scope of an audit includes:
   - performing the audit in accordance with the Hong Kong Standards on Auditing (HKSAs) issued by the Hong Kong Institute of Certified Public Accountants
   - planning and conducting audit tests to obtain reasonable assurance about whether the financial statements are free from material misstatement
   - examining and evaluating the audit evidence that supports the financial statement amounts and disclosures
   - evaluating the appropriateness of accounting policies used by management
   - assessing the significant estimates made by management in the preparation of the financial statements
   - evaluating the fair presentation of the overall financial statements
   - providing a reasonable basis for forming an audit opinion

2. Auditors cannot obtain absolute assurance that material misstatements in the financial statements will be detected because of the following reasons:
   - Owing to the inherent limitations of an audit, there is an unavoidable risk that some material misstatements of the financial statements will not be detected, even though the audit is properly planned and performed in accordance with Hong Kong Standards on Auditing.
   - An audit does not guarantee all material misstatements will be detected because of factors such as:
     (a) the use of judgment
     (b) the use of testing
     (c) the inherent limitations of internal controls
     (d) the fact that much of the evidence available to the auditors is persuasive rather than conclusive in nature

3. External auditors achieve the objective of enhancing the degree of confidence of intended users in financial statements by means of expressing an opinion on whether the financial statements are prepared, in all material respects, in accordance with an applicable financial reporting framework and are presented fairly. To enable the auditor to form that opinion, an audit should be conducted in accordance with HKSAs and relevant ethical requirements.

   As the basis for the auditor's opinion, HKSAs require the auditor to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error. In addition, the HKSAs require that the auditor exercise professional judgment and maintain professional scepticism during the audit process. He should:
   - identify and assess risks of material misstatement based on an understanding of the entity and its environment
   - obtain sufficient appropriate audit evidence about whether material misstatements exist by applying appropriate audit procedures
   - form an opinion on the financial statements based on conclusions drawn from the audit evidence obtained

Long Questions

1.
(a) HKSA 200 "Overall Objectives of the Independent Auditor and the Conduct of an Audit in Accordance with Hong Kong Standards on Auditing" states that the overall objectives of the auditor in conducting an audit of financial statements are:
   - To obtain reasonable assurance about whether the financial statements:
     (i) as a whole are free from material misstatement, whether due to fraud or error
     (ii) are, in all material respects, in accordance with an applicable financial reporting framework
   - To report on the financial statements, and communicate as required by the HKSAs, in accordance with the auditor's findings

(b) An auditor conducts an audit which involves the following:
- performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements
- selecting procedures based on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements
- considering internal control relevant to the preparation of the financial statements and designing audit procedures that are appropriate in the circumstances. However, this is not for the purpose of expressing an opinion on the effectiveness of the entity's internal control
- evaluating the appropriateness of the accounting policies used by management
- evaluating the reasonableness of accounting estimates made by management
- evaluating the reasonableness and overall presentation of the financial statements

(c) Basically, the auditor's opinion enhances the credibility of the financial statements and the following benefits can be derived from this:
- Owners of the asset can be assured that those to whom they have entrusted the asset are using the company's resources in a proper manner.
- An external auditor, who is an employee of a CPA firm, helps to ensure that financial statements are free of bias and manipulation and this can minimise the information risks for users of financial statements.
- Investors in the capital market can be assured that they will be provided with "true and fair" information about the investee.
- Owners of the company can be assured of the reduced possibility of false information being provided by managers — that is, agency risk.

(d) Comparison between internal auditor and external auditor:

		Internal Auditor	External Auditor
(i)	Scope and objectives	Vary, depending on the size, structure and management's requirements of the entity; they include monitoring the adequacy and effectiveness of internal control.	To express an independent opinion as to whether client's financial statements give a true and fair view.
(ii)	Degree of independence	An internal auditor is a staff member of the company, and therefore not independent of it.	An external auditor is independent of the company because he/she is an employee of a CPA firm.
(iii)	Reporting Line	Depends on the organisational structure of the entity; internal auditors report to either the board of directors or audit committee, or both.	Auditors' report is a way to communicate auditor's opinion to shareholders of the company.

(e) In reaching a conclusion on whether financial statements present a true and fair view, the auditor should consider the following:
- Requirements of financial reporting standards and accounting standards
  Accounting standards are designed to ensure that financial statements that are prepared in accordance with the standards will present a true and fair view. It is necessary to comply with accounting standards, unless there are grounds for departure from the standards. In carrying out their work, auditors must be careful to check that appropriate accounting standards have been complied with.
- Professional scepticism
  Based on his experiences and the audit evidence accumulated, the auditor should have professional scepticism when making a judgment on whether the client's financial statements have been prepared and presented in a true and fair view. In particular, this involves whether the client's financial statements are presented in accordance with the specific requirements of the applicable financial reporting framework for particular classes of transactions, account balances and disclosures.
- Materiality and reasonable assurance
  The Framework suggests that information is material if "its omission or misstatement could influence the economic decisions of users taken on the basis of the financial statements".

2.

	Audit Steps	Objectives
(a)	Send an engagement letter to the client	• To document the audit arrangements. • To clarify matters that may be misunderstood. Other acceptable answers include: • To agree to the terms of engagement, such as responsibilities of directors and auditors, audit fee, etc.
(b)	Gain an understanding of the client, its activities and its circumstances	• To understand events, transactions and practices that may have a significant impact on the financial statements. Other acceptable answers include: • To identify and assess the risks of material misstatement on the financial statements whether due to fraud or error.

		• To design and perform further audit procedures.
(c)	Perform an analytical review at the planning stage	• To assess audit risk. • To identify problem areas. Other acceptable answers include: • To set the materiality level.
(d)	Gain an understanding of the accounting system	• To understand how the accounting system functions. • To identify the existence of control points, such as completeness control, accuracy control, authorisation control and segregation of duties.
(e)	Evaluate the internal controls over the accounting system	• To identify strengths and weaknesses in internal controls.
(f)	Carry out tests of controls	• To ascertain whether laid-down controls on which audit reliance is planned are functioning properly/effectively.
(g)	Apply substantive tests of transactions and account balances.	To ensure the data produced by the accounting system are: (a) complete (b) accurate (c) valid
(h)	Perform audit completion work and a final review	• To ensure sufficient evidence has been collected. • To ensure the evidence on which the opinion is based is appropriate.
(i)	Issue the management letter to the client	• To inform management of weaknesses found in the accounting system and any other matters of concern.
(j)	Issue the audit report to the shareholders	• To inform the shareholders of the opinion formed about the truth and fairness of the financial statements.

CHAPTER 2

Activities

1. Fraudulent financial reporting
   - intentional misapplication of accounting policies to present a better financial position
   - not recording the transaction according to its substance

   Misappropriation of assets
   - misappropriating cash receipts from customer and then writing off the debtor's balance to bad debt
   - disposal of office furniture with the intention of taking it for own use

2. The audit procedures for identifying the possible non-compliance with laws and regulations are:
   - understanding the entity and its environment
   - conducting appropriate audit procedures so as to obtain sufficient appropriate audit evidence for it
   - obtaining written representations from management and those charged with governance

3. Because only the client company is in a contractual relationship with the auditor, the client company can sue the auditor for breach of contract under the law of contract. On the other hand, the third party who feels they may have suffered losses as a result of the auditor not performing the auditing function with the required standard of care, can sue the auditor under the law of tort. "Tort" refers to civil wrong, other than that arising under contract law, giving rise to a claim for damages. Negligence is one of the many branches of tort.

Work Them Out

1. A	2. B	3. C	4. C	5. B	6. C	7. B	8. D	9. A	10. D

Short Questions

1.

(a) The directors are responsible for the preparation, and the true and fair presentation of financial statements in accordance with the Hong Kong Financial Reporting Standards issued by the Hong Kong Institute of Certified Public Accountants. This responsibility includes:
- designing, implementing and maintaining internal controls relevant to the preparation and the true and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error
- selecting and applying appropriate accounting policies
- making accounting estimates that are reasonable in the circumstances

(b) The auditors' responsibility is to express an opinion on the financial statements based on their audit.

2.
(a) The auditor's report should state that management is responsible for:
- preparing the financial statements in accordance with the applicable financial reporting framework
- presenting truly and fairly the financial statements in accordance with the applicable financial reporting framework
- designing, implementing and maintaining internal controls relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error
- selecting and applying appropriate accounting policies
- making accounting estimates that are reasonable in the circumstances

(b) The auditor's responsibility is to express an opinion on the financial statements based on the audit.

An audit is conducted in accordance with the Hong Kong Standards on Auditing issued by the Hong Kong Institute of Certified Public Accountants.

An audit provides reasonable assurance on whether the financial statements are free from material misstatement.

3. Misstatements in the financial statements can arise from fraud or error.

The term "error" refers to an unintentional misstatement in financial statements, including the omission of an amount or a disclosure, such as:
- a mistake in gathering or processing data from which financial statements are prepared
- an incorrect accounting estimate arising from oversight or misinterpretation of facts
- a mistake in the application of accounting principles relating to measurement, recognition, classification, presentation, or disclosure

The term "fraud" refers to an intentional act by one or more individuals among management, those charged with governance, employees, or third parties, involving the use of deception to obtain an unjust or illegal advantage. Although fraud is a broad legal concept, the auditors are concerned with fraudulent acts that cause a material misstatement in the financial statements.

Management has the primary responsibility for the prevention and detection of fraud and error.

4.
(a) In the financial statements, the management is responsible for:
- preparing the financial statements in accordance with the applicable financial reporting framework
- presenting the financial statements truly and fairly in accordance with the applicable financial reporting framework
- designing, implementing and maintaining internal controls relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error
- selecting and applying appropriate accounting policies
- making accounting estimates that are reasonable in the circumstances

(b) An auditor will describe an audit in an auditor's report including the following:
- an audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements
- the procedures selected depend on the auditor's judgment of the financial statements, whether due to fraud or error
- auditors assess the risks of material misstatement
- in making these risk assessments, the auditor considers internal controls relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances
- the evaluation of the appropriateness of the accounting policies used
- the evaluation of the reasonableness of accounting estimates made by management
- the evaluation of the overall presentation of the financial statements

Long Questions

1.
(a) The financial statements that auditors have to report on include:
- a balance sheet
- an income statement
- a statement of changes in equity (also known as statement of recognised income and expense) showing either:
  (i) all changes in equity, or
  (ii) changes in equity other than those arising from transactions with equity holders acting in their capacity as equity holders
- a cash flow statement
- notes, comprising a summary of significant accounting policies and other explanatory notes

(b) Under S.141(3) of the Companies Ordinance, it is the duty of auditors to report on the accounts concerning:
- the compliance with the provisions of the Companies Ordinance
- the truth and fairness

Under S.141(4) of the Companies Ordinance, it is the duty of auditors to report on whether:
• proper accounting records have been kept
• proper returns have been received from branches not visited by the auditors
• the accounts are in agreement with the books of account and returns

(c) (i) The rights of auditors given under the Companies Ordinance that can empower them to carry out their duties of reporting to the members on the financial statements include:
• the right to access at all times the books, accounts and vouchers of the company. (S.141(5) of the Companies Ordinance)
• the right to require from officers (directors and employees) of the company such information and explanations as the auditor thinks necessary to form his opinion (S.141(5) of the Companies Ordinance)
• the right to receive notices and attend members' general meetings and to report on any matter which concerns him as auditor (S.141(7) of the Companies Ordinance)
• an officer of the company who knowingly or recklessly makes a misleading, false or deceptive statement to the auditor of the company (whether orally or in writing) is guilty of an offence and is liable to imprisonment and a fine (S.134 of the Companies Ordinance)

(ii) The rights of auditors given under the Companies Ordinance upon resignation include:
• the rights to have the company send a statement of circumstances connected with their resignation or a statement of no such circumstances to the members or creditors within 14 days (S.140A(3)(b) of the Companies Ordinance)
• the right to request an extraordinary general meeting (EGM) held for circumstances surrounding the resignation (S.140B (1) of the Companies Ordinance)
• the right to receive notices of, attend and be heard as a former auditor, in the general meetings:
— At which his term of office would otherwise have expired
— At which it is proposed to appoint a new auditor
— At the EGM which he has requisitioned (S.140B (5) of the Companies Ordinance)
• the rights for the auditors to have the company send a statement of circumstances to the members in advance of the meetings mentioned above; or to have such a statement read out at the meeting (S.140B (2) & (3) of the Companies Ordinance)

(d) If the auditors have identified a fraud, they should communicate these matters to the appropriate level of management on a timely basis, or to a proper authority in the public interest and consider the need to report such matters to those charged with governance in accordance with HKSA 260 "Communications of Audit Matters with Those Charged with Governance".

2.
(a) External auditors can maintain a reasonable standard of professional care by taking the following measures:
• adhering to the Code of Ethics for Professional Accountants laid down by HKICPA
• complying with the agreed terms and conditions of the audit engagement and as implied by law
• applying the updated auditing standards and having sufficient knowledge of the updated accounting standards
• hiring competent staff who possess appropriate qualifications and who are adequately trained
• assigning appropriate staff to the audit assignment and having appropriate supervision when they are carrying out their duties

(b) Under common law, the external auditor may be held liable for negligence to the client and to the third party. Liability for negligence usually arises from a deviation of the reasonable standard of care that is expected of an auditor when conducting an audit engagement.
(i) Client
To establish an auditor's liability for negligence, the client must prove that:
• The auditor had the duty to the client to conform to a required standard of care.
• The auditor failed to act in accordance with that duty.
• The client suffered actual loss or damage.
• There was a causal connection between the auditor's negligence and the client's loss or damage.
(ii) Third party
To establish an auditor's liability for negligence, the third party must prove that:
• The auditor had the duty to the plaintiff to exercise due care.
• The auditor breached that duty by not following professional standards.
• The third party suffered actual loss or damage.
• The auditor's breach of due care was an approximate cause of the third-party's loss or damage.

(c) In relation to the performance measurement, the measures that external auditors may take to reduce their professional liability involve:
(i) At firm level
There should be a partner responsible for quality control issues such as:
• establishing policies and procedures — ensuring audit engagements are performed according to professional standards and applicable legal and regulatory requirements
• promoting quality of engagement performance — having sufficient engagement supervision, training, coaching and consultation to staff

- performing supervision responsibilities appropriately — tracking the progress of the job, identifying matters for consultation, and assigning staff with appropriate capacities
- ensuring that review responsibilities, including for cold and hot reviews, are carried out by more experienced audit team members

(ii) At engagement level
The engagement partner should be responsible for the direction, supervision and performance of the audit engagement and appropriate auditor's report, e.g.
- notifying the audit team members about the client's business nature, risk-related issues, and problems that may arise
- ensuring that conclusions resulting from the consultations by experienced staff have been implemented
- considering whether audit documentation selected for review reflects the work performed in relation to the significant judgments and supports the conclusions reached

CHAPTER 3

Activities

1. The sources for acquiring knowledge of a potential client's operations and industry are:
   - previous years' audit files of clients from the same industry
   - inquiry with management of the entity and with other knowledgeable people
   - publications related to the industry
   - legislation and regulations that significantly affect the entity
   - visits to the entity's premises and plant facilities

2. Auditors' judgment in performance materiality is affected by factors such as:
   - auditors' understanding of the entity's business and industry
   - results of the performance of the risk assessment procedures
   - nature, size and extent of misstatements identified in previous audits
   - auditors' expectations with regard to the misstatements that might occur in the current period

3. There are difficulties in measuring the components of the audit risk model because:
   - There are issues such as business risks that may affect inherent risk. Certain factors affecting business risks (such as political development) are not easy to quantify.
   - There are certain areas that require subjective judgment; e.g. the risk of not detecting material misstatements resulting from fraud is higher than that resulting from errors.

4. With regard to the audit plan, the following information should be included in the audit documentation:
   - The overall audit strategy: This is a record of the key decisions considered necessary to properly plan the audit and to communicate significant matters to the engagement team, e.g. key decisions regarding the overall scope, timing and conduct of the audit.
   - The audit plan: This is a record of the planned nature, timing and extent of risk assessment procedures and further audit procedures at the assertion level in response to the assessed risks, including standard audit programs or audit completion checklists

Work Them Out

1. D	2. A	3. C	4. C	5. B	6. D	7. A	8. D	9. C	10. B

Short Questions

1.

(a) Audit risk has three components: inherent risk, control risk, and detection risk.

(b) In documenting a client's accounting system and related controls, flowcharts have the following advantages over narrative notes because:
- It is easier to identify from a flowchart whether there is an adequate segregation of duties.
- It is easier to follow a diagram than to read a description.
- It is usually easier to update a flowchart than a narrative.

(c) In documenting a client's accounting system and related controls, flowcharts have the following disadvantages:
- It is time-consuming to prepare flowcharts.
- It is technically demanding to prepare flowcharts.
- It is costly to prepare flowcharts.

2.

(a) In the context of financial statements, information is material if its omission or misstatement could influence the economic decisions of users taken on the basis of the financial statements.

Materiality depends on the size and nature of the item or error judged in the particular circumstances of its omission or misstatement.

Materiality provides a threshold or cut-off point rather than being a primary qualitative characteristic which information must have if it is to be useful.

(b) During the course of an audit, auditors should consider materiality when:
- determining the nature, timing and extent of audit procedures
- evaluating the effect of misstatements

(c) The auditors' assessment of materiality and audit risk could be different between the time of initially planning the engagement and at the completion of an audit because of:
- a change in circumstances; or
- a change in the auditors' knowledge as a result of performing audit procedures

(d) The two components forming the aggregate of uncorrected misstatements are:
- specific misstatements identified by the auditors including the net effect of uncorrected misstatements identified during the audit of previous periods
- the auditors' best estimate of other misstatements, which cannot be specifically identified (i.e. projected errors)

(e) If the aggregate of uncorrected misstatements identified is considered material, the auditors may consider:
- extending audit procedures when the uncorrected misstatements are material as compared with the preliminary materiality level, or
- requesting the directors to adjust the financial statements when misstatements are material, or
- qualifying the audit opinion if management refuses to adjust the financial statements

(f) Audit risk is the risk that the auditor may give an inappropriate audit opinion on the financial statements.

(g) Audit risk (AR) has three main components: inherent risk (IR), control risk (CR) and detection risk (DR). These three risks multiplied together give total audit risk.

Thus: AR = IR x CR x DR

3.

(a) Determining factors on materiality are:
- Quantitative factors. Materiality is a relative rather than absolute term. Bases are needed for measuring materiality, such as pre-tax profit, total assets, total equity, or total revenue
- Qualitative factors, e.g. errors including fraud and irregularities, breach of contractual obligation, change in earning trends

(b) There is an inverse relationship between materiality and the level of audit risk, i.e. the higher the materiality level, the lower the audit risk and vice versa.

(c) Auditors can control audit risk at an acceptably low level by either:
- reducing the assessed risk of material misstatement, where this is possible, and supporting the reduced level by carrying out extended or additional tests of control; or
- reducing detection risk by modifying the nature, timing and extent of planned substantive procedures

(d) If the aggregate of uncorrected misstatements identified is considered material to the financial statements, to ensure that the audit risk can be maintained at a low level, they may consider:
- extending audit procedures when the uncorrected misstatements are material as compared with the preliminary materiality level, or
- requesting the directors to adjust the financial statements when misstatements are material, or
- qualifying the audit opinion when misstatements are material

Long Questions

1.

(a) Audit documentation serves mainly:
- to provide the principal support for the auditor's report
- to help the auditor conduct and supervise the audit

(b) The document for the appointment of auditors is the engagement letter. Auditors require the client to sign the engagement letter so as to avoid misunderstandings between clients and auditors with respect to the engagement.

(c) The audit programme serves as:
- a set of instructions to the audit team
- a means of controlling and recording the proper execution of the work
- a record of the audit procedures to be adopted, the audit objectives, timing, sample size and basis of selection of the sample for each area

(d) The auditor ordinarily excludes the following items from audit documentation:
- superseded drafts of working papers and financial statements
- notes that reflect incomplete or preliminary thinking
- previous copies of documents corrected for typographical or other errors, and duplicates of documents

(e) Significant matters to be documented by auditors include any three items below:
- audit findings or issues with significance
- actions taken to address them
- discussions with management (when and with whom)
- basis for the final conclusion

(f) HKSA 230 identifies seven factors the auditor should consider in determining the nature and extent of the documentation for a particular audit area or auditing procedure:
- the nature of the audit procedures to be performed
- the identified risks of material misstatement
- the extent of judgment required in performing the work and evaluating the results
- the significance of the audit evidence obtained
- the nature and extent of exceptions identified
- the need to document a conclusion or the basis for a conclusion not readily determinable from the documentation of the work performed or audit evidence obtained
- the audit methodology and tools used

2.

(a) In addition to the scope of audit, audit engagement letters would generally include reference to:
- the objective of the audit of financial statements
- management's responsibility for the financial statements
- the form of any reports or other communication of results of the engagement
- because of the test nature and other inherent limitations of an audit, together with the inherent limitations of internal control, there is an unavoidable risk that even some material misstatement may remain undiscovered
- unrestricted access to whatever records, documentation and other information requested in connection with the audit
- management's responsibility for establishing and maintaining effective internal control

(b) In order to ascertain the scope of the audit engagement, the auditor may ask the following questions:
- Which financial reporting framework [International / Hong Kong / UK Financial Reporting Standards (IFRSs / HKFRSs / UKFRSs)] on which the financial information to be audited has to be prepared? Is there a need for reconciliation between HKIFRS and IFRS or UKFRS? This helps to identify which accounting standards the client should adopt for the preparation of the financial statements.
- Are there any industry-specific reporting requirements such as reports mandated by the regulators (Hong Kong Monetary Authority and UK's Financial Services Authority)? This helps to identify the scope of reporting.
- How many branch offices does the bank have and where are their locations? This helps the auditor ascertain the expected audit coverage, including the number and locations of components to be included.
- What is the percentage of shares of the US affiliate owned by Kingwise Bank? The nature of the control relationships between a parent and its components will determine how the group is to be consolidated.
- Is the US affiliate an important asset of Kingwise Bank? The question aims to identify the extent to which components of the group are audited by other auditors.
- In what types of sophisticated banking business does Kingwise Bank engage? This identifies the nature of the business segments to be audited, including the need for specialised knowledge, such as operation of investment banking and trade finance.
- What is the reporting currency? Is there a need for currency translation for the financial information audited? The auditor has to plan the work on verifying the translation and ascertain the appropriateness and consistency of the accounting policy.
- Does the bank need a statutory audit of the financial statements at the company level, in addition to an audit for consolidation purposes? In some countries, there is no statutory requirement to prepare audited financial statements at the company level.
- Can we have the list of jobs performed by the internal auditors? External auditors may review the work performed by the internal auditors and determine whether they can rely on the work performed by the internal auditors.
- Does the bank have any internal control report issued by the preceding external auditors? The auditor may make use of audit evidence obtained in previous audits to plan for the risk assessment procedures and tests of controls.
- Which models of computer hardware and software are used by the bank for processing of transactions? The auditor may consider the effect of information technology on the audit procedures, including the availability of data and the expected use of computer-assisted audit techniques.

• Is there any timetable for the release of interim results? The auditor has to coordinate with the client on the expected coverage and timing of the audit work with any reviews of interim financial information. The auditor may consider the effect on the audit of the information obtained during such reviews.
• Does the bank have an organisation chart? Who are the key client personnel to deal with?
• What sort of financial documents would be available for the auditor? The auditor needs to obtain the chart of accounts, trial balance, profit and loss accounts, and balance sheet to understand the client's financial status.
• Has the bank used any external service organisations or outsourced any of its operations? The auditor may have to plan how to obtain evidence concerning the design or operation of controls performed by them.

CHAPTER 4

Activities

1. In making the evidence decision for an audit, the auditor should consider whether:
• there should be a balance between persuasiveness of evidence and the cost involved in collecting the evidence
• it is sufficient for the auditor to evaluate whether the client's financial statements are fairly presented
• the audit can be conducted in an effective and efficient manner
• the audit evidence decision for audit procedures and timing affects the appropriateness and competence of audit evidence
• the audit evidence decision for sample size and items to select affects the sufficiency of audit evidence accumulated

2. Audit evidence obtained directly by the auditors is of good quality. However, only that which is relevant to the audit objective is useful. The aging analysis of accounts receivable prepared by the auditor is relevant to the objective of testing the valuation of accounts receivable.

Besides preparing the aging analysis, reviewing the subsequent settlement of receivables is another way to obtain audit evidence relating to the valuation of accounts receivable. Therefore, audit evidence can be from different sources or of a different nature that is relevant to the same assertion.

3. Using a bank confirmation for verifying the accuracy of bank balance is appropriate because:
• It is relevant to the audit objective and assertion.
• The bank, as the information provider, is of good quality because of its independence and because it is also subject to the surveillance of regulatory bodies.
• Deposits at bank are objective figures and no estimation is required.
• It is sent by the auditor to the bank and returned directly to the auditor.
• Its reliability is high because a bank confirmation is in a documentary form, from an independent source and is an original document.

4. In making this decision, factors that auditors may consider in selecting specific items include:
• nature of the entity's business and operations — e.g. if the audit client has a complex group structure, related party transactions are specific items that auditors should select for testing
• assessed risks of material misstatement — e.g. client may have subjectivity in assessing allowance for doubtful debts; as a result, the balance of allowance for doubtful debts should be selected for review as its assessed risks of material misstatement are high
• characteristics of the population being tested — e.g. if the population constitutes a few balances of accounts receivable that are of high value and a large number of balances of accounts receivable that are of immaterial amount, then the auditor should select all accounts receivable balances that are of material amount

5. In considering the degree of reliance on an expert's work, HKSA 620 suggests that the auditor assess whether the scope of the expert's work is sufficient for the audit purpose as well as the following:
• professional competence of the valuer by inspecting his professional certificate and licence and considering his experience and reputation in the field
• the objectivity of the expert by considering whether the valuer will be impaired when he is employed by the entity or is financially dependent on the entity

6. Three examples of means of obtaining audit evidence:
• inspection — Performing physical inspection of plant and machinery
• inquiry — Asking management to explain verbally the company's policy for credit approval
• external confirmation — Bank confirmation for verifying bank balances

The reliability of the above audit evidence can be assessed based on the following criteria:
• Evidence in documentary form is more reliable than oral representation; therefore, bank confirmation is more reliable than an oral explanation for credit approval policy.
• Evidence acquired from independent sources is more reliable than that generated within the entity; therefore, a bank confirmation or physical inspection by auditor is more reliable than management's explanation.
• Evidence generated by the auditor is more reliable than the evidence obtained indirectly. In this case, a physical inspection of plant and machinery is more reliable than management explanation.

To conclude, external confirmation is the most reliable among the three because:
• The confirmation comes from an independent source and is returned directly to the auditor.
• The information provider is subjected to the surveillance of regulatory bodies, therefore, the information should be of good quality.

Work Them Out

1. C	2. D	3. A	4. B	5. B	6. A	7. B	8. B	9. D	10. C

Short Questions

1.

(a) Appropriateness of audit evidence is the measure of the quality of audit evidence; i.e. its relevance and its reliability in providing support for the conclusions on which the auditor's opinion is based.

(b) Sufficiency of audit evidence is the measure of the quantity of audit evidence. The quantity of the audit evidence needed is affected by the auditor's assessment of the risks of material misstatement and also by the quality of such audit evidence.

(c) The following general rules are about the reliability of audit evidence:
• The reliability of audit evidence is increased when it is obtained from independent sources outside the entity.
• The reliability of audit evidence that is generated internally is increased when the related controls, including those over its preparation and maintenance, imposed by the entity are effective.
• Audit evidence obtained directly by the auditor (e.g. observation of the application of a control) is more reliable than audit evidence obtained indirectly or by inference (e.g. inquiry about the application of a control).
• Audit evidence in documentary form, whether paper, electronic, or other medium, is more reliable than evidence obtained orally (e.g. a contemporaneously written record of a meeting is more reliable than a subsequent oral representation of the matters discussed).
• Audit evidence provided by original documents is more reliable than audit evidence provided by photocopies or facsimiles, or documents that have been filmed, digitised or otherwise transformed into electronic form, the reliability of which may depend on the controls over their preparation and maintenance.

(d) Commonly used audit procedures to collect audit evidence include the following:
• inspection
• observation
• external confirmation
• recalculation
• re-performance
• analytical procedures
• inquiry

2. The objective of the auditor in obtaining audit evidence is to have reasonable assurance about whether the financial statements:
• as a whole are free from material misstatement, in all material respects, in accordance with an applicable financial reporting framework
• comply with the Companies Ordinance and other relevant legislation

Auditors need to obtain audit evidence to draw reasonable conclusions on which to base the audit opinion. Audit evidence is the information obtained by the auditors:
• as a basis for reaching audit conclusions with regard to whether client's financial statements are of a true and fair view
• for determining the type of audit opinion to be issued

Audit evidence:
• comprises source documents, accounting records, auditor's re-performance of client's work, and corroborating information
• can be from both internal and external sources
• is obtained from an appropriate mix of various types of audit tests

Long Questions

1.

(a)

	Audit Objectives Relating To Inventory	Direct confirmation from third-party sales agents provides strong evidence (State "Yes" or "No")	If your answer is "Yes", state a limitation. If your answer is "No", state your reason.
(i)	Completeness	No	Unrecorded inventory would be detected only if the third-party sales agents are aware of the items and report them in the confirmation. The quality of audit evidence also depends on the records of the third-party sales agents.
(ii)	Valuation	Yes	Limited both as to aspects of valuation that can be observed (e.g. damaged items close to expiry date and having limited shelf life) and those that are reported by the third-party sales agents.
(iii)	Existence	Yes	Limited to inventories held by the third-party sales agents.
(iv)	Ownership	Yes	Limited because ownership could have been transferred without the third-party sales agents' knowledge.
(v)	Accuracy	Yes	Limited to those aspects of accuracy that can be confirmed, i.e. quantity and description.

(b) An auditor's judgment as to what is sufficient appropriate audit evidence is influenced by:
- the assessment of the nature and degree of risk of misstatement at both the financial statement level and the account balance or class of transactions level
- the nature of the accounting and internal control systems, including the control environment (the auditor's experience as to the reliability of the management and staff of the entity and of its record)
- the financial position of the entity
- the materiality of the item being examined
- the persuasiveness of the evidence, and the source and reliability of information available
- experience gained during previous audits and the auditor's knowledge of the business and industry
- the findings from audit procedures, including indications of fraud or error

(c) In general, audit evidence obtained under the following circumstances is considered to be reliable:
- Audit evidence is more reliable when it is obtained from independent sources outside the entity.
- Audit evidence that is generated internally is more reliable when the related controls imposed by the entity are effective.
- Audit evidence obtained directly by the auditors is more reliable than audit evidence obtained indirectly or by inference.
- Audit evidence is more reliable when it exists in documentary form, whether paper, electronic, or in another medium.
- Audit evidence provided by original documents is more reliable than audit evidence provided by photocopies or facsimiles.

2.

(a) Audit evidence is all the information used by the auditor in arriving at the conclusions on which the audit opinion is based, and includes the information contained in the accounting records underlying the financial statements and other information.

Audit evidence, which is cumulative in nature, includes evidence obtained from audit procedures performed during the course of the audit and may include evidence obtained from other sources such as previous audits and a firm's quality control procedures for client acceptance and continuance.

(b) Sufficiency is the measure of the quantity of audit evidence.

Appropriateness is the measure of the quality of audit evidence, i.e. its relevance and reliability in providing support for, or detecting misstatements in, the class of transactions, account balances, and disclosures and related assertions.

(c) In general, audit evidence obtained under the following circumstances is considered to be reliable:
- Audit evidence is more reliable when it is obtained from independent sources outside the entity.
- Audit evidence that is generated internally is more reliable when the related controls imposed by the entity are effective.
- Audit evidence obtained directly by the auditors is more reliable than audit evidence obtained indirectly or by inference.
- Audit evidence is more reliable when it exists in documentary form, whether paper, electronic, or in another medium.
- Audit evidence provided by original documents is more reliable than audit evidence provided by photocopies or facsimiles.

(d) In planning attendance at the physical inventory count, the auditors should consider the following:
- the risks of material misstatement related to inventory
- whether adequate procedures are expected to be established and proper instructions issued for physical inventory counting
- the timing of the count
- the locations at which the inventory is held
- whether an expert's assistance is needed

(e) The auditor should carry out audit procedures in order to become aware of any litigation and claims involving the entity which may result in a material misstatement of the financial statements. Such procedures would include the following:
- make appropriate inquiries of management including obtaining representations
- review minutes of those charged with governance and correspondence with the entity's legal counsel
- examine legal expense accounts
- use any information regarding the entity's business obtained from discussions with the in-house legal department
- review correspondence with customers and suppliers
- send letters to lawyers

3.

(a) Other than the confirmation of accounts receivable and accounts payable balances, the following are situations where external confirmations may be used to obtain audit evidence:
- bank balances and other information from bankers
- stocks held by third parties at bonded warehouses for processing or on consignment
- property title deeds held by lawyers or financiers for safe custody or as security
- investments purchased from stockbrokers but not delivered at the balance sheet date
- loans from lenders

(b) External confirmation of an account receivable provides reliable and relevant audit evidence regarding the existence of the account as at a certain date.

However, such confirmation does not ordinarily provide all the necessary audit evidence relating to the valuation assertion, since it is not practicable to ask the debtor to confirm detailed information relating to its ability to pay the account.

(c) A blank confirmation request requires the respondent to fill in the amount or furnish other information.

The advantage of a blank confirmation request is that it reduces the risk of the respondent replying to the confirmation without verifying that the information is correct. On the other hand, the use of a blank confirmation request may result in lower response rates because additional effort is required of the respondents.

(d) A negative confirmation request asks the respondent to reply only in the event of disagreement with the information provided in the request.

The advantage of a negative confirmation request is to reduce the auditor's workload in handling a large number of small balances. On the other hand, the use of a negative confirmation request gives no explicit audit evidence that intended third parties have received the confirmation requests and verified that the information contained therein is correct.

(e) Where no response is received to a positive confirmation request from a trade debtor, auditors can perform the following alternative audit procedures:
- examination of subsequent cash receipts to provide audit evidence of the existence assertion
- examination of shipping documentation or other client documentation to provide audit evidence of the existence assertion
- examination of sales near the period-end to provide audit evidence of the cut-off assertion

(f) Where no response is received to a positive confirmation request from a trade creditor, auditors can perform the following alternative audit procedures:
- examination of subsequent cash disbursements to provide audit evidence of the existence assertion
- examination of correspondence from third parties to provide audit evidence of the existence assertion
- examination of other records, such as goods received notes to provide audit evidence of the completeness assertion

(g) Information obtained from bank confirmation requests assists auditors in discharging their responsibilities to obtain sufficient appropriate audit evidence by providing external evidence in relation to such matters as the existence, completeness and valuation of assets and liabilities.

The following statements are incorrect:
(III) Bank confirmation cannot provide external audit evidence in relation to the valuation of assets.
(IV) Bank confirmation cannot provide external audit evidence in relation to the valuation of liabilities.

CHAPTER 5

Activities

1.

(i) Relevance of the audit procedures to the specific risks to a particular class of transactions
Usually, the auditor increases the extent of audit procedures as the risk of material misstatement increases. Nevertheless, increasing the extent of an audit procedure is effective only if the audit procedure itself is relevant to the specific risk. Therefore, the nature of the audit procedure is the most important consideration because it is concerned with the assertions and risk of material misstatements.

(ii) Using the work performed by the internal audit function as part of the audit evidence
The nature, timing and extent of audit procedures to be carried out by external auditors will be affected by the degree of reliance on the work performed by the internal audit function. External auditors determine the degree of reliance on work performed by the internal audit function after considering the independence of internal audit and the nature and scope of work done by them.

(iii) Using the work of the experts as part of the audit procedures
The assessment of the work of the experts must be included as part of the audit procedures. Procedures for this purpose involve the assessment of their competence, capacity, objectivity, responsibilities, etc.

2. The auditor cannot use audit evidence obtained during an interim period only for ensuring the operating effectiveness of internal controls because:
• the control system may have changed significantly after the interim period
• the fact that the control activities have been operating effectively during the first part of the year cannot guarantee that they will continue to do so in the remaining period

Therefore, when the auditor obtains audit evidence about the operating effectiveness of controls during an interim period, he should:
• obtain audit evidence about areas where there are significant changes to certain controls subsequent to the interim period
• determine the additional audit evidence required to be obtained for the rest of the period under review

3. The evidence obtained from observation performed by the auditor applies only to the time when the observation occurs and this problem can be minimised through the following:
• observing the control activities performed by client staff at different points of time
• using the results of tests of controls from the previous year as audit evidence for the current year
• observing the control activities without the knowledge of the employees

4. The main factors affecting the relative emphasis of substantive procedures to be performed include:
• the auditors' assessment of the control environment and accounting system
• the inherent and control risks relating to each assertion
• if the tests of controls provide evidence that the internal control system is effective, the extent of relevant substantive procedures may be reduced, but not totally eliminated

5. To evaluate whether the expectation is sufficiently precise, the auditor should check:
• the accuracy with which the expected results of substantive analytical procedures can be predicted. For example, the auditor may compare the gross profit margins from the current period with the previous period to ensure they are consistent, after taking into account the changes in profit margin among different years
• the availability of the information, both financial and non-financial. For example, the auditor may consider:
(a) whether financial information such as budgets or forecasts is available for calculating the gross profit margin and then use it to compare with the actual amount of the current year under review
(b) whether non-financial information such as the number of units sold is available for calculating the expected gross profit margin

6. The auditor can reduce sampling risks through the following ways:
• carefully planning and designing the audit sample by considering:
(a) the purpose of the audit procedures
(b) the characteristics of the population from which the sample will be drawn
• increasing the sample size; the lower the risk the auditor is willing to accept, the greater the sample size will need to be
• using an appropriate sampling method

The auditor can reduce non-sampling risks by means of:
• applying the appropriate planning process
• having adequate supervision and sufficient quality review
• conducting quality control procedures at firm and assignment level

Work Them Out

1. C	2. B	3. D	4. C	5. B	6. A	7. B	8. D	9. A	10. C

Short Questions

1.

(a) Sampling risk arises from the possibility that the auditor's conclusion, based on a sample, may be different from the conclusion reached if the entire population were subjected to the same audit procedure.

There are two ways to control sampling risk:

(i) adjust sample size — Increasing sample size will reduce sampling risk, and vice versa. In the extreme case, a sample of all items of a population will have a zero sampling risk

(ii) using an appropriate sampling method — This does not eliminate or even reduce sampling risk, but it does allow auditors to measure the risk associated with a given sample size in a reliable manner

(b) Non-sampling risk occurs when audit tests do not uncover existing exceptions in the sample.
The two causes of non-sampling risk are:

(i) the auditor's failure to recognise exceptions

(ii) the auditor's selection and application of inappropriate or ineffective audit procedures

2.

(a) Sampling risk arises from the possibility that the auditor's conclusion, based on a sample, may be different from the conclusion reached if the entire population were subjected to the same audit procedure.

There are two ways of controlling sampling risk:

(i) adjust sample size — Increasing sample size will reduce sampling risk, and vice versa. In the extreme case, a sample of all items of a population will have a zero sampling risk

(ii) using an appropriate sampling method — This does not eliminate or even reduce sampling risk, but it does allow auditors to measure the risk associated with a given sample size in a reliable manner

(b) In the case of a test of controls, sampling risk will affect the audit effectiveness and the audit efficiency as follows:

(i) In the first type of sampling risk, auditors will conclude that controls are more effective than they actually are. This type of risk affects audit effectiveness and is more likely to lead to an inappropriate audit opinion.

(ii) In the second type of sampling risk, auditors will conclude that controls are less effective than they actually are. This type of risk affects audit efficiency as it would usually lead to additional work to establish that initial conclusions were incorrect.

(c) Non-sampling risk arises from factors that cause auditors to reach an erroneous conclusion for any reason not related to the size of the sample. Major causes of non-sampling risk are:

(i) auditors using inappropriate audit procedures

(ii) auditors misinterpreting audit evidence and failing to recognise an error

3.

(a) (i) In performing tests of controls, auditors can obtain audit evidence about their operating effectiveness, such that the controls can be relied upon by the auditors.

(ii) In performing substantive procedures, auditors can obtain audit evidence to determine whether transactions and balances are correctly recorded and may detect misstatements in amounts or frequency greater than is consistent with the auditors' risk assessments.

(b) Auditors sometimes exclude tests of controls and only perform substantive procedures because (give any two items):

(i) The auditors' risk assessment procedures have not identified any effective controls relevant to the assertion.

(ii) Testing the operating effectiveness of controls would be inefficient.

(iii) Testing the controls is not a cost-effective method for the auditors.

(c) Auditors seldom perform tests of controls of very small entities because:

(i) There may not be many control activities within the entities.

(ii) Controls may be overridden by the management.

(d) Analytical procedures involve the following:

(i) analyse significant ratios and trends

(ii) investigate any material fluctuations

(iii) investigate relationships that are inconsistent with other relevant information obtained during the audit

(iv) investigate reasons for results that deviated from predicted amounts

(e) Apart from serving as substantive procedures, analytical procedures can serve as:
(i) risk assessment procedures to obtain an understanding of the entity and its environment
(ii) an overall review of the financial statements at the end of the audit
or
Analytical procedures serve as substantive procedures when their use can be more effective or efficient than tests of details in reducing the risk of material misstatement at the assertion level to an acceptably low level.

(f) When designing and performing analytical procedures as substantive procedures, the auditor will need to consider a number of factors such as the following:
(i) the suitability of using substantive analytical procedures given the assertions
(ii) the reliability of the data, whether internal or external, from which the expectation of recorded amounts or ratios is developed
(iii) whether the expectation is sufficiently precise to identify a material misstatement at the desired level of assurance
(iv) the amount of any difference between recorded amounts and expected values that is acceptable

4.
(a) Analytical procedures involve the following:
(i) analysing significant ratios and trends
(ii) investigating any material fluctuations
(iii) investigating relationships that are inconsistent with other relevant information obtained during the audit
(iv) investigating the reason for results which deviate from predicted amounts

(b) Planning phase
Analytical procedures can be used as risk assessment procedures to obtain an understanding of the entity and its environment. The application of analytical procedures may indicate aspects of the entity which the auditor was unaware of and will assist in assessing the risks of material misstatement in order to determine the nature, timing and extent of further audit procedures.

The analytical procedures help the auditors:
(i) to identify significant matters which may require the auditors' special consideration later during the audit process
(ii) to understand the client's environment and its industry and business
(iii) to assess the entity as a going concern
(iv) to indicate any possible misstatements
(v) to reduce the extent of detailed tests

(c) Testing phase
Analytical procedures can be used as substantive procedures in collecting appropriate audit evidence. Substantive procedures will be performed by auditors when their use can be more effective or efficient than tests of details in reducing the risk of material misstatement at the assertion level to an acceptably low level. Analytical procedures can be performed together with other substantive procedures, which include substantive tests of transactions and tests of details of balances.

The analytical procedures help the auditors:
(i) to indicate any possible misstatements that may have been omitted during the planning phase
(ii) to reduce the extent of detailed tests

(d) Completion phase
Analytical procedures can be used as part of an overall review of the financial statements at the end of the audit, so as to assist the auditors in reaching conclusions about the fair presentation of the financial statements.

The analytical procedures help the auditors:
(i) to make a final review of the audited financial statements objectively
(ii) to assess the entity as a going concern
(iii) to indicate any possible misstatements that may have been omitted during the planning or testing phase

Long Questions

1.

	Audit Procedures	Audit Objectives To Be Accomplished	Name/Type Of Accounts Tested
(a)	Review the repayment schedule of loans from banks	Test for proper disclosure/ classification/accuracy	Relating to liabilities (bank loans)
(b)	Review correspondence with lawyers	Test for existence	Relating to outstanding litigations (accruals)
(c)	Trace delivery notes and shipping documents issued before and after year-end to related sales invoices and accounting records	Either: (i) Test for completeness/ existence or (ii) Test for proper cut-off	Either: (i) Relating to accounts receivables OR (ii) Relating to sales
(d)	Perform physical inspection of investment securities	Test for ownership/ existence/accuracy	Relating to investments
(e)	Confirm inventory held by third parties	Test for existence/ ownership/accuracy	Relating to inventory
(f)	Perform company search with the Companies Registrar	Test for completeness/accuracy	Relating to share capital
(g)	Review bank confirmation for the existence of guarantees, bill discounted with recourse and guarantees	Test for proper disclosure/ accounting treatment	Relating to contingent liabilities
(h)	Review the board minutes to note any authorisation for capital expenditure that has been made before year-end but has not been included in the schedule of capital commitments at year-end	Test for proper disclosure	Relating to capital commitments
(i)	Test subsequent selling price of finished goods	Test for valuation (stated at the lower of cost and net realisable value)	Relating to finished goods
(j)	Perform physical count on petty cash	Test for existence/accuracy	Relating to petty cash

2

(a) Sampling risk is the risk that the auditor's conclusion based on a sample may be different from the conclusion if the entire population were subjected to the same audit procedure.

Sampling risk can lead to two types of erroneous conclusions:

(i) In the case of a test of controls, that controls are more effective than they actually are, or in the case of a test of details, that a material misstatement does not exist when in fact it does. The auditor is primarily concerned with this type of erroneous conclusion because it affects audit effectiveness and is more likely to lead to an inappropriate audit opinion.

(ii) In the case of a test of controls, that controls are less effective than they actually are, or in the case of a test of details, that a material misstatement exists when in fact it does not. This type of erroneous conclusion affects audit efficiency as it would usually lead to additional work to establish that initial conclusions were incorrect.

(b)

	Sampling Method	Number Of Samples Selected	Monetary Value Total Of Samples Selected
(i)	Apply large dollar coverage method: Select 10% of population with the highest sales value	5	$2,850
(ii)	Apply block selection method: Select samples from invoice number 37 to 41	5	$2,400
(iii)	Apply systematic selection method: Starting from invoice number 15, select samples with a sampling interval of 5	8	$3,320
(iv)	Apply stratified sampling method: Select all invoices with invoice number ending with "1" and "6"	10	$3,250

(i) Samples selected

A01	$100	**A11**	$200	**A21**	$300	**A31**	$400	**A41**	$500
A02	$110	**A12**	$210	**A22**	$310	**A32**	$410	**A42**	$510
A03	$120	**A13**	$220	**A23**	$320	**A33**	$420	**A43**	$520
A04	$130	**A14**	$230	**A24**	$330	**A34**	$430	**A44**	$530
A05	$140	**A15**	$240	**A25**	$340	**A35**	$440	**A45**	$540
A06	$150	**A16**	$250	**A26**	$350	**A36**	$450	**A46**	$550
A07	$160	**A17**	$260	**A27**	$360	**A37**	$460	**A47**	$560
A08	$170	**A18**	$270	**A28**	$370	**A38**	$470	**A48**	$570
A09	$180	**A19**	$280	**A29**	$380	**A39**	$480	**A49**	$580
A10	$190	**A20**	$290	**A30**	$390	**A40**	$490	**A50**	$590

(ii) Samples selected

A01	$100	**A11**	$200	**A21**	$300	**A31**	$400	**A41**	$500
A02	$110	**A12**	$210	**A22**	$310	**A32**	$410	**A42**	$510
A03	$120	**A13**	$220	**A23**	$320	**A33**	$420	**A43**	$520
A04	$130	**A14**	$230	**A24**	$330	**A34**	$430	**A44**	$530
A05	$140	**A15**	$240	**A25**	$340	**A35**	$440	**A45**	$540
A06	$150	**A16**	$250	**A26**	$350	**A36**	$450	**A46**	$550
A07	$160	**A17**	$260	**A27**	$360	**A37**	$460	**A47**	$560
A08	$170	**A18**	$270	**A28**	$370	**A38**	$470	**A48**	$570
A09	$180	**A19**	$280	**A29**	$380	**A39**	$480	**A49**	$580
A10	$190	**A20**	$290	**A30**	$390	**A40**	$490	**A50**	$590

(iii) Samples selected

A01	$100	**A11**	$200	**A21**	$300	**A31**	$400	**A41**	$500
A02	$110	**A12**	$210	**A22**	$310	**A32**	$410	**A42**	$510
A03	$120	**A13**	$220	**A23**	$320	**A33**	$420	**A43**	$520
A04	$130	**A14**	$230	**A24**	$330	**A34**	$430	**A44**	$530
A05	$140	**A15**	$240	**A25**	$340	**A35**	$440	**A45**	$540
A06	$150	**A16**	$250	**A26**	$350	**A36**	$450	**A46**	$550
A07	$160	**A17**	$260	**A27**	$360	**A37**	$460	**A47**	$560
A08	$170	**A18**	$270	**A28**	$370	**A38**	$470	**A48**	$570
A09	$180	**A19**	$280	**A29**	$380	**A39**	$480	**A49**	$580
A10	$190	**A20**	$290	**A30**	$390	**A40**	$490	**A50**	$590

(iv) Samples selected

A01	$100	**A11**	$200	**A21**	$300	**A31**	$400	**A41**	$500
A02	$110	**A12**	$210	**A22**	$310	**A32**	$410	**A42**	$510
A03	$120	**A13**	$220	**A23**	$320	**A33**	$420	**A43**	$520
A04	$130	**A14**	$230	**A24**	$330	**A34**	$430	**A44**	$530
A05	$140	**A15**	$240	**A25**	$340	**A35**	$440	**A45**	$540
A06	$150	**A16**	$250	**A26**	$350	**A36**	$450	**A46**	$550
A07	$160	**A17**	$260	**A27**	$360	**A37**	$460	**A47**	$560
A08	$170	**A18**	$270	**A28**	$370	**A38**	$470	**A48**	$570
A09	$180	**A19**	$280	**A29**	$380	**A39**	$480	**A49**	$580
A10	$190	**A20**	$290	**A30**	$390	**A40**	$490	**A50**	$590

(c) Circumstances where sampling is not appropriate include the following situations:

(i) The auditor is "on enquiry" as a result of previous information. The auditor's suspicions have been raised and therefore a greater degree of caution will need to be exercised in carrying out the audit work. This may involve applying audit tests to the entire population in these circumstances.

(ii) Populations are too small for valid conclusions to be drawn and, in any event, it is quicker to test all transactions rather than spend time constructing a sample.

(iii) All the transactions in a particular area are material and should therefore be subjected to examination by the auditor.

(iv) The data may be "sensitive" items, such as directors' emoluments which require precise disclosure in the financial statements, regardless of their size.

(v) The audit area does not consist of items of the same kind i.e. there is a non-homogeneous population. In this situation, it would be difficult, if not impossible, to construct a representative sample.

(d) If statistical sampling is to be used, the following conditions need to be present:
   (i) The population to be tested must be homogeneous. This is necessary if the statistical theory is to be valid.
   (ii) The population must be reasonably large; otherwise the benefits of the technique will not be achieved. Statistical techniques need to be adjusted to work on small populations.
   (iii) Expectation of error must be low – in other words control risk must already have been assessed by the auditor as low or medium. (High control risk results in impractically large sample sizes under many statistical sampling techniques.)
   (iv) The items in the population must be easily identifiable once selected, so that checking of the items chosen is easily carried out. This means in practice that items such as invoices must be pre-numbered and filed in sequence.

CHAPTER 6

Work Them Out

1. C	2. B	3. D	4. D	5. A	6. D	7. D	8. A	9. B	10. C

Short Questions

1. The steps that must be completed by the auditor before he can conclude that control risk is low are:
   (i) obtain an understanding of the control environment, risk assessment procedures, accounting information and communication system, control activities being employed and monitoring methods at a fairly detailed level
   (ii) identify specific controls that will reduce control risk and make an assessment of control risk
   (iii) test the controls for effectiveness
   (iv) revise or conclude assessment of control risk

2.
(a) The five components of internal control are:
   (i) the control environment
   (ii) the control activities
   (iii) the entity's risk assessment process
   (iv) the information system (including the relevant business processes) relevant to financial reporting and communication
   (v) monitoring of controls

(b) All control systems have inherent limitations, such as
   (i) the potential for human failure, e.g. simple errors or mistakes
   (ii) collusion of two or more people to "get around" controls that segregate duties
   (iii) inappropriate management override of internal control
   (iv) internal controls normally do not cover non-recurring transactions (such as one-off year-end adjustments) or unusual transactions, which are often large and subject to error
   (v) the need to balance the cost of the control with its benefits
   (vi) the obsolescence of controls which have not changed to reflect changes in the business activities or the organisation

(c) Manual controls may be less reliable than automated controls because they can more easily be:
   (i) bypassed
   (ii) ignored
   (iii) overridden
   (iv) prone to simple errors and mistakes

   Consistency of application of a manual control element cannot therefore be assumed.

(d) Manual aspects of systems may be more suitable where judgment and discretion are required, such as for the following circumstances:
   • large, unusual or non-recurring transactions
   • circumstances where errors are difficult to define, anticipate or predict
   • in changing circumstances that require a control response outside the scope of an existing automated control
   • in monitoring the effectiveness of automated controls

(e) The risk assessment procedures shall include the following:
   (i) inquiries of management and of others within the entity who in the auditor's judgment may have information that is likely to assist in identifying risks of material misstatement due to fraud or error
   (ii) analytical procedures
   (iii) observation
   (iv) inspection

3.

(a) Controls That Were Absent	(b) Audit Objectives Not Met	(c) Control To Correct Deficiency
(i) Segregation of duties — authorisation for payment from signing of cheques for payment not separated; adequate documents and records	Recorded transactions exist.	Signing of cheque is to be done by person other than the purchasing director and the invoice should be attached with the goods received note before payment is made.
(ii) Independent checks on performance	Recorded transactions are stated at the correct amounts.	Double count by another person and independent checks on performance.
(iii) Independent checks on performance; adequate documents and records; information and communication	Recorded transactions are stated at the correct amounts.	Make sure that the change in prices is communicated to the employees involved through an immediate notice and that the clerk receives the current price list. Internal verification by someone who has been involved in the change of prices.

Long Question

1.

(a) The control environment is a broad concept. It refers to management's overall attitude, awareness and actions regarding internal controls and their importance in the organisation.

(b) The control environment sets the tone of an organisation, influencing the control consciousness of its people. It is the foundation for effective internal control, providing discipline and structure.

(c) In evaluating the design of the entity's control environment, auditors should consider the following elements and how they have been incorporated into the entity's processes:

(i) Communication and enforcement of integrity and ethical values
This refers to the management's action to communicate ethical standards to its employees. It also involves their action to remove incentives and temptations which may induce employees to engage in dishonest, illegal or unethical acts. These are essential elements which influence the effectiveness of the design, administration and monitoring of controls.

(ii) Commitment to competence
This is the management's consideration of the competence levels for particular jobs. The commitment is reflected in their consideration of how to translate those levels into requisite skills and knowledge.

(iii) Participation by those charged with governance
A control environment's effectiveness depends on the independence, experience and extent of scrutiny of activities by those charged with governance. Their status and recognition in an organisation is also important. They should be independent from management. A good control environment also depends on the information they receive, the degree to which difficult questions are raised and pursued with management and their interaction with internal and external auditors.

(iv) Management's philosophy and operating style
This is the management's approach to taking and managing business risks. It can also be the management's attitudes and actions towards financial reporting, information processing and accounting functions and personnel.

(v) Organisational structure
The framework within which an entity's activities for achieving its objectives are planned, executed, controlled and reviewed. A good internal control should have an organisational structure which sets the lines of responsibility and authority.

(vi) Assignment of authority and responsibility
This refers to how authority and responsibility for operating activities are assigned and how reporting relationships and authorisation hierarchies are established. A company should establish formal communication methods on authority and responsibility and make these known clearly to everybody.

(vii) Human resource policies and practices
These refer to a company's policies and practices of recruiting, orientating, training, evaluating, counselling, promoting and compensating employees.

(d) It is possible to reduce the volume of transaction testing required in conducting an audit if the internal controls are sound and are operating effectively, but it is not likely that an auditor will be able to rely on internal controls entirely. This is because all control systems have inherent limitations such as:
- The need to balance the cost of the control with its benefits.
- Internal controls normally do not cover non-recurring transactions (such as one-off year-end adjustments) or unusual transactions, which are often large and subject to error.
- The potential for human error may arise.
- The possibility of fraudulent collusion (two or more persons operating together) to “get around” controls that segregate duties.
- The abuse of authority and management’s overriding of controls.
- The obsolescence of controls which have not changed to reflect changes in the business activities or the organisation.

(e) The primary responsibility for the prevention and detection of fraud and error rests with the management of an entity and those charged with governance.

CHAPTER 7

Activities

1. Access controls in advanced systems should include:
   - physical security over remote terminals
   - authorisation controls that limit access only to authorised information
   - firewalls
   - user identification controls such as passwords
   - data communication controls such as encryption of data

Work Them Out

1. A	2. C	3. B	4. B	5. D	6.B	7. C	8. A	9. D	10. D

Short Questions

1. (i) (d)
   (ii) (e)
   (iii) (f)
   (iv) (c)
   (v) (a)
   (vi) (b)

2.
(a) “Auditing around the computer” refers to the situation in which auditors ignore the controls and computer processing. Auditors examine inputs to the computer and the corresponding outputs. The computer is treated as a “black box”.

Auditing around the computer is suitable if the following conditions are met:
- Computer processing is relatively simple.
- An audit trail is clearly visible.
- A substantial amount of updated documentation is available to explain how the system works.

(b) “Auditing through the computer” refers to the situation in which auditors follow the audit trail through the internal computer operations and perform verification work to prove that the processing controls are functioned correctly. Auditors test the computer controls and verify the accuracy for the processing of input data by the computer system.

Auditing through the computer is suitable if the following situations are met:
- The application system processes large volumes of input and produces large volumes of output that makes it difficult to directly examine the input and output.
- Significant parts of the internal control system are embedded in the system.
- The logic of the system is complicated.
- When it is more efficient and less costly to simply audit through the computer.

3.

(a) The nature of internal control characteristics and risks are summarised in the following table.

Characteristics	Risks
Transaction Trail	
• Might exist for only a short period of time • Might exist only in computer-readable form • May not be a complete trail where a complex application system is involved	• Errors embedded in an application's program logic are not easy to be detected on a timely basis by manual procedures
Nature Of Processing Errors	
• Usually caused by programming errors or systematic errors in the hardware or software • Might be due to input errors which are supposed to be detected by input controls	• Reduced risk in spotting errors and irregularities as a result of decreased human involvement in handling transactions. • Errors/irregularities can remain undetected for a long period of time if they occur during the design or modification stage of programs.
Processing Of Transactions	
• Clerical errors associated with manual processing are virtually eliminated as a result of consistent performance of computer processing functions.	• Programming errors (or other systematic errors in hardware or software) ordinarily result in all transactions being processed incorrectly.
Alteration Of Data Or Files	
• Greater potential for unauthorised access to data or for altering data without visible evidence • Automation of initiating and executing transactions is available	• Permanent data stored in master file can often be altered without being detected (for a long time) • The authorisation of these transactions or procedures may not be documented in the same way as those in a manual system. • Management's authorisation of these transactions may be implicit in its acceptance of the design and subsequent modification.

(b) If general controls are ineffective, there may be potential for material misstatement in each computer-based accounting application.

Long Question

1.

(a) CAATs may be used in performing various auditing procedures, including the following:
- tests of details of transactions and balances, e.g. the use of audit software for recalculating interest or the extraction of invoices over a certain value from computer records
- analytical procedures, e.g. identifying inconsistencies or significant fluctuations
- tests of general controls, e.g. testing the set-up or configuration of the operating system or access procedures to the program libraries or by using code comparison software to check that the version of the program in use is the version approved by management
- sampling programs to extract data for audit testing
- tests of application controls, e.g. testing the functioning of a programmed control
- re-performing calculations performed by the entity's accounting systems

(b) When planning an audit, the auditors may consider an appropriate combination of manual and computer-assisted audit techniques. In determining whether to use CAATs, the factors to consider include:
- IT knowledge, expertise and experience of the audit team
- availability of CAATs and suitable computer facilities and data
- impracticability of manual tests
- effectiveness and efficiency
- timing

(c) CAATs may provide effective tests of control and substantive procedures where:
- there are no input documents
- there is no visible audit trail
- the population and sample sizes are very large

(d) (i) Application control
(ii) Application control
(iii) General control
(iv) General control
(v) Application control
(vi) General control
(vii) Application control

CHAPTER 8

Work Them Out

1. C	2. B	3. C	4. D	5. A	6. A	7. B	8. B	9. C	10. D

Short Questions

1.

(a) A written representation is ordinarily a more reliable audit evidence than an oral representation. It can take the form of:
- a representation letter from management
- a letter from the auditor outlining the auditor's understanding of management's representations, duly acknowledged and confirmed by management
- relevant minutes of meetings of the board of directors or similar body or a signed copy of the financial statements

(b) The management representation letter is addressed to the auditors.

(c) A management representation letter would ordinarily be signed by the members of the board of directors or management who have primary responsibility for the entity and its financial aspects (ordinarily the senior executive officer and the senior financial officer) based on the best of their knowledge and beliefs. In certain circumstances, the auditor may wish to obtain representation letters from other members of management. For example, the auditor may wish to obtain a written representation about the completeness of all minutes of the meetings of shareholders, the board of directors and important committees from the individual responsible for keeping such minutes.

(d) A management representation letter would ordinarily be dated the same date as the auditor's report.

(e) The auditor should obtain written representations from management to fulfil the following objectives:
- The management acknowledges its responsibility for the preparation of the financial statements in accordance with the applicable financial reporting framework, inducing where relevant their fair presentation, as set out in the terms of the audit engagement.
- The management has provided the auditor with all relevant information and access as agreed in the terms of the audit engagement. It also acknowledges that all transactions have been recorded and are reflected in the financial statements.
- If a threshold amount of misstatement is determined and it cannot be regarded by the auditor as clearly trivial, such threshold amount is communicated to management and is included in the written representations letter.

(f) Representations by management cannot be a substitute for other audit evidence that the auditor could reasonably expect to be available. As auditors could reasonably expect to receive the reply of audit confirmation from debtors, auditors should not substitute the debtors circularisation with representation by management, especially since debtors circularisation provides strong relevant third- party evidence on the existence of debtors.

(g) If management refuses to provide a representation that the auditor considers necessary, this constitutes a scope limitation and the auditor should express a qualified opinion or a disclaimer of opinion. In such circumstances, the auditor would evaluate any reliance placed on other representations made by management during the course of the audit and consider if the other implications of the refusal may have any additional effect on the auditor's report.

2.

(a) (i) The lawsuit may have been uncovered through inquiries with the client, written representations from management or reading correspondences from client's solicitors.

(ii) The sale at a substantial profit could be uncovered by reviewing minutes of the board of directors or shareholders, reviewing correspondence files, reviewing cash receipts records of the subsequent period, or through discussion with management.

(iii) The sale of a large amount of inventories at discounted price could be uncovered by reviewing the minutes of the board of directors, or reviewing the management accounts of subsequent periods.

(b) (i) The lawsuit has just been filed, so an adjustment made to the current year's financial statements is not necessary. Auditors need to ensure it is disclosed in a note to the financial statements.

(ii) The sale should be disclosed in a note to the financial statements. The explanation should include the amount of the gain and the effect, if any, on future operations of the company. No audit report modification is necessary.

(iii) The subsequent sale of inventories at discounted price should be checked to see if they are below costs. The effect on the valuation of inventory at balance sheet should be assessed on whether it is material or not. If it is material, the auditor needs to adjust the inventory value at the balance sheet date and no modification in the audit report is necessary. If the management refuses to adjust, the auditor needs to consider a qualified opinion and issue a modified report.

Long Questions

1.

(a) Subsequent events are events occurring between the date of the financial statements and the date of the auditor's report, and facts that become known to the auditor after the date of the auditor's report.

(b) What procedures and responsibility the auditor should take depends on three different periods as stated below:

(i) For events occurring between the date of the financial statements and the date of the auditor's report:
- The auditor has to perform audit procedures designed to obtain sufficient audit evidence to determine whether an adjustment of or disclosure in the financial statements is necessary.
- However, he is not expected to perform additional audit procedures on matters to which previously applied audit procedures have provided satisfactory conclusions.

(ii) For facts which become known to the auditor after the date of the auditor's report but before the date the financial statements are issued:
- The auditor has no obligation to perform any audit procedures regarding the financial statements after the date of the auditor's report.
- If a fact becomes known to him and management amends the financial statements, he shall provide a new auditor's report.
- On the other hand, if management does not amend the financial statements and the auditor's report has not yet been provided to the entity, the auditor shall modify the opinion. If the auditor's report has already been provided to the entity, and financial statements are issued, he shall take appropriate action to seek to prevent reliance on the auditor's report.

(iii) For facts which become known to the auditor after the financial statements have been issued: the situation for the auditor is the same as (ii) above.

(c) It fails to allow for the possibility that a subsequent transaction may shed additional light on transactions or evaluations that were made in the year of the audit report. The audit of subsequent transactions is also necessary for determining the proper cut-off for the current year.

(d) Six examples of information obtained by examining subsequent events which are essential to the current year audit are:
- sale of inventory as scrap
- write-off of a large account receivable due to bankruptcy
- new knowledge regarding a tax dispute
- settlement of a claim resulting from a lawsuit
- partial or complete destruction of uninsured property due to a fire
- discovery of oil on the land

CHAPTER 9

Work Them Out

1. B	2. D	3. A	4. C	5. D	6. C	7. D	8. C	9. A	10. C

Short Questions

1.

(a) The directors are responsible for the preparation, and the true and fair presentation of financial statements in accordance with the Hong Kong Financial Reporting Standards issued by the Hong Kong Institute of Certified Public Accountants. This responsibility includes:
- designing, implementing and maintaining internal controls relevant to the preparation and the true and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error
- selecting and applying appropriate accounting policies
- making accounting estimates that are reasonable in the circumstances

(b) The auditors' responsibility is to express an opinion on the financial statements based on their audit.

(c) The scope of an audit includes:
- conducting the audit in accordance with the Hong Kong Standards on Auditing issued by the Hong Kong Institute of Certified Public Accountants
- planning and performing audit tests to obtain reasonable assurance about whether the financial statements are free from material misstatement
- examining the audit evidence that supports the financial statement amounts and disclosures
- evaluating the appropriateness of accounting policies used by management
- assessing the significant estimates made by management in the preparation of the financial statements
- evaluating the presentation of the overall financial statements
- providing a reasonable basis for the opinion

2.

(a) Where the auditors disagree with the accounting treatment or disclosure of a matter in the financial statements, and in the auditors' opinion the effect of that disagreement is material to the financial statements, the auditors should include in the opinion section of their report:
- a description of all substantive factors giving rise to the disagreement
- their implications for the financial statements
- whenever practicable, a quantification of the effect on the financial statements

(b) When the auditors conclude that the effect of the matter giving rise to disagreement is so material or pervasive that the financial statements are seriously misleading, they should issue an adverse opinion.

(c) The auditors should date the auditors' report as of the completion date of the audit. Dating the auditors' report as of the completion date of the audit informs the reader that the auditors have considered the effect on the financial statements and on the report events and transactions which the auditors became aware of and which occurred up to that date. In practice, the completion date of the audit may be earlier than the date of physical signature of the auditors' report.

Long Question

1.

(a) If the use of the going-concern assumption is appropriate but a material uncertainty exists, the auditor needs to consider whether the financial statements:
- adequately describe the principal events or conditions that give rise to the significant doubt on the entity's ability to continue in operation and management's plans to deal with these events or conditions
- state clearly that there is a material uncertainty related to events or conditions which may cast significant doubt on the entity's ability to continue as a going concern and, therefore, that it may be unable to realise its assets and discharge its liabilities in the normal course of business

(b) If the company has not adequately disclosed the items mentioned in (a) above, the auditors would:
(i) express a qualified or adverse opinion, as appropriate
(ii) have the report include specific reference to the fact that there is a material uncertainty that may cast significant doubt about the entity's ability to continue as a going concern

(c) Audit procedures that may identify conditions and events indicating going-concern problems include the following:
- analysing and discussing cash flow, profit and other relevant forecasts with management
- analysing and discussing the entity's latest available interim financial statements
- reviewing the terms of debentures and loan agreements and determining whether any have been breached
- reading minutes of the meetings of shareholders, those charged with governance and relevant committees for reference to financing difficulties
- inquiring of the entity's lawyer regarding the existence of litigation and claims and the reasonableness of management's assessments of their outcome and the estimate of their financial implications
- confirming the existence, legality and enforceability of arrangements to provide or maintain financial support with related and third parties and assessing the financial ability of such parties to provide additional funds
- considering the entity's plans to deal with unfilled customer orders
- reviewing events after the period end to identify those that either mitigate or otherwise affect the entity's ability to continue as a going concern

(d) Examples of financial conditions that indicate financial distress include the following (give any three):
- net liability or net current liability position as shown in the financial statements
- fixed-term borrowings approaching maturity without realistic prospects of renewal or repayment; or excessive reliance on short-term borrowings to finance long-term assets
- circumstances indicating withdrawal of financial support by debtors and other creditors
- negative operating cash flows indicated by historical or prospective financial statements
- adverse key financial ratios, like high gearing ratio, poor quick ratio
- inability to pay creditors on due dates or dragging payables as a result of poor cash flows position
- substantial operating losses or significant deterioration in the value of assets used to generate cash flows
- dividends to be paid were in arrears or discontinuance of dividends
- inability to comply with the terms of loan agreements
- change from credit to cash-on-delivery transactions by suppliers
- inability to obtain financing for essential new product development or other essential investments

(e) Examples of non-financial matters that cast doubt on the going-concern assumption include the following (give any three):
- loss of key management without replacement
- loss of a major market, franchise, licence, or principal supplier
- labour difficulties or shortages of important supplies
- non-compliance with capital or other statutory requirements
- pending legal or regulatory proceedings against the entity that may, if successful, result in claims that are unlikely to be satisfied
- changes in legislation or government policy expected to adversely affect the entity

CHAPTER 10

Activities

1.

- Information system can help to collect detailed cost information for both value-added and non-value added activities. It can also help to analyse the causes of costs and the cost drivers. This information enables management to prepare a more realistic budget for planning and control.
- Information system is able to collect information from different units of the organisation and then compute variance analysis. The technique of responsibility accounting system can be used by the operation manager to measure performance by tracing unfavourable performance to the department or individual that causes the inefficiencies.

2.

- Pinpoint where the problem arises: MIS continuously supplies information flowing to the manager. The manager uses the MIS primarily to signal or to identify problems, and then to understand them by pinpointing locations and causes.
- Use forecasts techniques to project future sales: EIS provides an approach to sales forecasting, which can allow the market executive to compare sales forecasts with past sales.
- Relate price with risks: ES is used by insurance companies to assess the risk presented by the customer and to determine a price for the insurance.

Work Them Out

1. D	2. C	3. C	4. A	5. B	6. D	7. A	8. A	9. C	10. B

Short Questions

1.

(a) A TPS has the following roles:
- process data resulting from business transactions
- update operational databases
- produce business documents

(b) An MIS is more powerful than a TPS because it provides information in the form of pre-specified reports and displays to support business decision-making.

Examples of an MIS report:
- sales analysis report
- production performance report
- cost trend reporting systems

(c) The main difference between an MIS and a DSS is that the DSS provides interactive ad hoc support for the decision-making processes of managers and other business professionals.

2.

(a) An ES can facilitate a manager's decision-making process in terms of:
- considering more alternatives
- applying a high level of logic
- devoting more time to evaluating decision results
- making more consistent decisions

(b) An ES can improve the performance of an organisation by:
- providing consistent answers for repetitive decisions, processes and tasks
- holding and maintaining significant levels of information and maintaining controls over the firm's knowledge
- reviewing transactions that human experts may overlook

(c) The limitations or disadvantages of an ES are (give any three items):
- An ES can only function effectively in areas where rules and frames of reference or programmable decisions can be applied.
- The lack of flexibility and ability of an ES to adapt to changing environments because questions are standard and cannot be easily changed.
- An ES cannot apply the judgment and intuition that are important ingredients when solving semi-structured or unstructured problems. As much of the knowledge and expertise has become intuitive, the knowledge engineer must spend a long time eliciting all the rules and their permutations. Costs can also be high as specialist programmers are required.
- Although expert systems can store the results of a previous analysis to assist in making responses to similar questions in the future more accurate, they cannot learn in the sense of finding new data and are not artificial intelligence systems.

3. Examples of the ways in which the banking industry can use information systems to enhance the competition:
   (i) Increasing the switching cost to its customers by using new system
   The bank may use sophisticated electronic banking services; as a result, once a customer has established familiarity with the system and gained advantages from its user-friendly and speedy service delivery, there will be a learning disincentive for the customer to switch to another system.
   (ii) Maintaining better customer relationship
   The bank can develop a customer relationship management (CRM) system, which is developed to exploit the information kept in customer profile databases and then analyse and categorise the customers. This information enables the bank to target certain customers for marketing new products or to provide incentives to enhance customer loyalty.

Long Question

1.

(a) A management information system is a system or process that provides information needed to manage organisations effectively.

(b) Types of management information systems that can assist management in decision-making include:
   (i) decision support systems
   (ii) expert systems
   (iii) executive information systems
   (iv) enterprise resource planning systems

(c) MIS reports which are useful for management to control inventory or accounts receivables include:
   (i) obsolete inventory report
   (ii) slow-moving inventory report
   (iii) inventory turnover report
   (iv) order placed but not yet fulfilled inventory report
   (v) aged accounts receivable report
   (vi) accounts receivable turnover report
   (vii) age analysis accounts receivable report

(d) (i) 1950s Transaction processing system
   (ii) 1960s Management information system
   (iii) 1970s Decision support system
   (iv) 1980s Executive information system
   (v) 1990s Enterprise resource planning system

(e) An enterprise resource planning system (ERPS) is an integrated computer-based system used to manage both internal and external resources, such as tangible assets, financial resources, materials, and human resources. It is a software architecture whose purpose is to facilitate the flow of information between all business functions inside the boundaries of the organisation and manage the connections to outside stakeholders. Built on a centralised database and normally utilising a common computing platform, an ERPS consolidates all business operations into a uniform and enterprise-wide system environment.

As ERPS centralises the data into one place, its advantages include:
- avoiding the problem created by the use of multiple systems
- enabling management to control those business processes which involve two or more departments or functions
- providing the full picture of the organisation in real time
- minimising the risk of losing sensitive data upon consolidation of data from different functions
- reducing the production lead time and delivery time in inventory handling and production by integration of supply chain
- facilitating business learning, empowering, and building common visions
- improving decision-making process by increasing the effectiveness of interface of software applications and by resolving data redundancy and integrity problems
- enhancing customer services and satisfaction by means of increased flexibility and responsiveness

However, ERPS has certain disadvantages:
- customisation of the ERP software is limited as the changing of the ERP software structure is usually not allowed
- ERPS is often seen as too rigid and too difficult to adapt to the specific workflow and business process of some companies
- costs involved in hardware, software, training (technical, business processes), data conversion, interfaces and customisation, professional services, re-assigned employees, and software maintenance
- resistance in sharing sensitive internal information between departments can reduce the effectiveness of the software

CHAPTER 11

Work Them Out

1. B	2. C	3. A	4. D	5. D	6. B	7. C	8. C	9. A	10. A

Short Questions

1.

(a) A data warehouse is a database, with tools, that stores data from current and previous years that have been extracted from the various operational and management databases. In other words, it is a term for any system that stores, retrieves, manages or otherwise manipulates massive amounts of data. From the warehouse, the data can be analysed using reporting and query tools to produce specific management reports.

(b) Benefits of a data warehouse include the following:
- It provides detailed historical information as compared to some systems which do not keep historical data.
- It can be used for extensive querying and reporting without affecting or being affected by the operational system.
- It provides smaller data marts for more detailed work on specific sections of the data warehouse.
- It enhances the ability to answer complex questions such as potential return on investment.
- It makes an improved data resource available to users enabling them to manipulate and use the data in intuitive ways.

(c) The challenges faced by the developers of data warehouse include the following:
- deciding what data to collect
- deciding how to standardise and clean the data to ensure uniform accuracy and consistency
- deciding how to deal with computer records that typically begin in non-normalised form so as to minimise redundancies
- determining data standards for data of different forms and varying frequencies
- ensuring users can access it easily and find answers to complex questions

2.

Presentation slide	(DM) or (OLAP)
It enables users to conduct multi-dimensional analysis, for example, by time, customer, product or geographical region.	OLAP
It aims to analyse the static data contained in a database.	DM
It tries to reveal patterns and correlations hidden in the data.	DM
It involves analysing complex relationships among thousands or millions of data items stored in a number of databases.	OLAP
It enables users to examine data at increasing levels of detail and can provide the reasons behind what has happened.	OLAP
It takes place online in real time.	OLAP
It mainly uses the database of a data warehouse.	DM
It tries to reveal trends in historical business activities.	DM
It enables users to interactively analyse complex relationships with rapid responses to the users' queries.	OLAP
It can be used to help managers make decisions about strategic changes in business operations.	DM

3. The controls that need to be implemented by e-commerce business entities so as to minimise the risks include the following:
- Installation of a password system should be enforced to prevent unauthorised access.
- Application of data encryption should be applied on data and transferred messages.
- System logs should be implemented to ensure that every activity on a system is logged and is subject to some form of exception reporting.
- There should be restriction of access to computer equipment and other devices.
- A firewall should be set up, together with well-policed corporate guidelines, to prevent threats from hackers and viruses.
- Random control checks on the system should be implemented to ensure that transactions are properly authorised.
- There should be an audit trail to check what has happened to a transaction if there are suspicions of any illegal changing of data on a file.
- There should be an installation of anti-virus software which searches computer systems for known viruses and destroys any that are detected.
- There should be an installation of a backup server to avoid the loss of business caused by the interruption of service from an Internet service provider.
- There should be an installation of a payment identification or certification system to prevent payments to a fraudulent website.

Long Question

1.

(a) Refer to Section 4.7.1 to answer this part of the question.

(b) Refer to Section 4.7.2 to answer this part of the question.

CHAPTER 12

Work Them Out

1. C	2. D	3. B	4. A	5. B	6. C	7. B	8. D	9. A	10. B

Short Questions

1.

(a) "Outsourcing" is the practice of contracting computer centre operations, telecommunications networks, or applications development to external vendors. These vendors are usually the specialists in providing hardware and software development, operations and maintenance.

(b) The advantages of outsourcing to a company include the following:
- Cost-effective business solution
- Organisations can eliminate the need for maintaining their own computer centre and information systems staff, thus concentrate on their core competencies.
- Flexibility in asset utilisation
- Organisations do not need to tie up their resources to build their own computer centre, which would be under-utilised when there is no peak load. Outsourcing allows an organisation with fluctuating needs for computer services to pay for only what it uses.
- Access to more advanced technology
- Some companies cannot afford to retain staff to manage and develop the increasingly complex networks. Sometimes, the internal IT staff of the company cannot keep pace with technological changes or innovative business practices.
- Improved development time
- By outsourcing to experienced industry specialists, the development time is comparatively faster and more efficient. The internal politics surrounding systems development can be avoided.

2.

(a) If a company does not want to be involved in developing an in-house information system, it can choose to purchase one in the market, or have the system custom-made by an external software house, or even find one from application service providers on the Internet.

(b) When purchasing software in the market, the company can choose between off-the-shelf application software and customised application software. The former is a set of pre-written, pre-coded programme that is commercially available for sale or lease. It is sold on the open market to a broad range of users with similar requirements. Customised application software also includes pre-written, pre-coded programmes but it can be modified by vendors to meet a company's unique requirements without destroying the integrity of the software. Another way to find a software package that is suitable to a company is through the Internet. Numerous application service providers deliver the software to their clients over the Internet, so the user does not need to really "install" or maintain it but rent it on the Internet.

Long Question

1.

(a) The advice to David would include the procedures that follow the principles of the system development life cycle. Before deciding whether to purchase that MIS system, he has to:
- Conduct a feasibility study to determine what kind of system he requires, and whether the new system is technically, economically, and operationally feasible for the company.
- Identify whether the system features that meet the requirements of management are ready available. If so, develop the criteria and evaluation factors.
- Consider whether the new system can offer the feature of customising the design output, and input. Control procedures involved in the package will also be considered.
- Develop an implementation plan even though the software house is the one installing the system for the company. The plan involves testing the integration of software to the company's existing hardware and operating system, and employee training.
- Get prepared to do a post-implementation review of the smooth operation of the new system and ensure the vendor provides maintenance and enhancement.

(b) Advantages of off-the-shelf computer packages are:
- They are relatively cheaper than self-developed or tailor-made systems.
- These packages are pre-tested before they are marketed so a company does not need to spend lots of time in testing.
- Vendors supply much of the ongoing maintenance and support for the system. They also supply enhancements or updated versions in line with ongoing technical and business developments.

Disadvantages are:
- They do not have the unique requirements of an organisation.

- The organisation no longer has total control over the system design once the package is purchased.
- The output format may not be customised to the required presentation style.
- There may be the risk of increased vulnerability to the continuity of the vendor's business.

CHAPTER 13

Work Them Out

1. D	2. C	3. A	4. B	5. C	6. C	7. B	8. C	9. A	10. B

Short Questions

1.

(a) A computer virus is a hidden program that inserts itself into the networked computer systems of anyone and forces the system to copy annoying or destructive routines.

(b) The three suggested reasons are:
- Viruses can spread very quickly. In a network environment a virus can spread to thousands of systems in a relatively short period of time. When the virus is confined to a single machine or to a small local area network (LAN), it will soon run out of computers to infect.
- Viruses are contagious and are easily spread from one system to another. A virus spreads when users share programmes, USB files and data or when they access and use programmes from external sources like free downloads from the Internet.
- Many computer viruses have long lives because they can create copies of themselves faster than the virus can be destroyed.

(c) Viruses are a significant threat to information systems because they make unauthorised alterations to the way a system operates and cause widespread damage by destroying or altering data or programmes. A virus can cause significant damage when it takes control of the computer, destroys the hard disk's file allocation table, and makes it impossible to boot the system or to access data on a hard disk.

2.

CIS Environment Review Procedures	General IT Controls
Review the documentation of an internally developed application system to determine if the modification policies and procedures have been properly complied with	Controls to ensure that proper documentation is kept
Review the CIS department's servicing guideline for period when typhoon signal number 8 is hoisted	Controls to ensure continuity of operations
Review that a change in a user's profile is properly authorised	Controls to prevent/detect changes to data files
Review the handling procedure on exception reports generated after processing of input data	Controls to prevent/detect errors during program execution
Review testing results before the implementation of a new program	Controls over systems development

Long Question

1.

(a) Risks which may be faced by XA Limited:

(i) System failure or destruction
This may result in the organisation not being able to operate effectively because of its dependence on the computerised information system. System failure or destruction may be caused by malfunction of hardware and software, natural disasters, human sabotage and viruses.

(ii) Loss or destruction of data
Loss of data will affect the daily operations of the company. Also, it may be costly for the company to recover the data. The loss or destruction of data may be caused by computer failure or human fraud. How much data is lost and the cost of recovery will depend on the back-up arrangement.

(iii) Changes to systems
Changes to system without proper arrangements will result in disruptions to operations and the provision of timely and reliable information. This problem may be caused by inadequate planning, improper project management and lack of proper authorisation.

(iv) Unauthorised access to hardware and software
Parties without proper authorisation may access the hardware and software of the system either on-site or remotely, and steal computer equipment or software. Moreover, it is possible for such unauthorised parties to obtain confidential information or make fraudulent use of the system, causing great losses to the company.

(v) Human errors
Staff may enter inaccurate standing or transaction data or use the wrong files for processing the data. Another example of human errors is that they may use the data/information in an improper way which breaches the data protection legislation.

The common threats are classified into five types:

(i) Natural and political disasters
Examples of natural and political disasters are fires, floods, earthquakes, war and attacks by terrorists. These disasters can destroy an information system and cause a company to fail.

(ii) Software errors and equipment malfunction
Examples include system bugs, operating system crashes, hardware failure, power outages and fluctuations, and undetected data transmission errors. Such threats may arise because the system has not been thoroughly tested or as a result of unexpected accidents, like a massive power failure. These threats may also result from technical errors in the design and development of the system.

(iii) Unintentional acts
Unintentional acts may be caused by the failure to follow established procedures and by poorly supervised personnel, and this may lead to the loss or misplacement of data. Sometimes, users may accidentally erase or alter files, data and programs.

(iv) Intentional acts (computer crimes)
Intentional acts are typically referred to as computer crimes which pose serious threats to the integrity, safety and quality of most business information systems. The major concern is the intrusion by employees, competitors and others to computer facilities, systems, software and data. This authorised access can result in data being stolen; damaged hardware, software or data; illegal use of software and fraud.

(v) Privacy issues
Email, World Wide Web, e-commerce or e-banking have become a part of everybody's daily life. At the back of these kinds of platform are the complex information technologies which can collect, store, integrate, interchange and retrieve data and information quickly and easily. Privacy concerns exist wherever uniquely identifiable data relating to a person or persons are collected and stored, in digital form or otherwise. Privacy concerns how data is collected, stored, as well as the right to access or use the data or information.

(c) The control over system acquisition, development and maintenance involves the establishment of control mechanisms in order to prevent the following from happening:
- improper development and maintenance of program
- unauthorised system software changes
- improper implementation of new releases of applications

Controls that should be found in system acquisition, development and maintenance are:
- Sufficient testing is carried out to ensure the new software is compatible with existing hardware and other software components and is able to process the required volumes of transactions.
- Approval for the implementation of the new application must be obtained from the user department.
- There must be safeguarding of the data/files processed and stored to facilitate the conversion of data from the old system to the new system.
- Proper authorisation for the acquisition or development of the new application must be obtained to ensure the adherence to standards of system design, programming and documentation.
- There must be control over the process of changes in system software by means of proper authorisation, approval, testing and implementation and documentation.
- There must be controls such as data encryption to prevent unauthorised access, and routing verification procedures to ensure routing to the correct computer network system address for hard-wired network systems.