



ICTSAS432

Identify and resolve client ICT problems

Assessment 1 of 6

Short Answer Questions

Assessor Guide



Assessment Instructions

Task Overview

This assessment task includes eight (8) short answer questions. Read each question carefully before typing your response in the space provided.

Important: Before commencing your work, you must update your *Student name* and *Student number* in the footer from **page 2** onwards.



Assessment Information

Submission

You are entitled to three (3) attempts to complete this assessment satisfactorily. Incomplete assessments will not be marked and will count as one of your three attempts.

All questions must be responded to correctly to be assessed as satisfactory for this assessment.

Answers must be typed into the space provided and submitted electronically via the Learning Platform. Hand-written assessments will not be accepted unless previously arranged with your assessor.

Reasonable adjustment

Students may request a reasonable adjustment for assessment tasks.

Reasonable adjustment usually involves varying:

- the processes for conducting the assessment (e.g. allowing additional time)
- the evidence gathering techniques (e.g. oral rather than written questioning, use of a scribe, modifications to equipment)

However, the evidence collected must allow the student to demonstrate all requirements of the unit.

Refer to the Student Handbook or contact your Trainer for further information.



Please consider the environment before printing this assessment.

Question 1

Identify three (3) common sustainable practices in the ICT industry and explain their application in a workplace that provides ICT support.

[Approximate word count: 35–60 words per sustainable practice]

Assessor instructions: Students must identify and explain sustainable practices consistent with the ICT industry.

Students are likely to use different wording than the sample answer provided. However, the acceptable responses must:

- be within the specified word limit
- reflect the characteristics described in the exemplar answer.

A sample answer is provided below.

Table 1 – Answer table for Question 1

Sustainable practices	Application of sustainable practices in the workplace [35–60 words]
a. Cloud computing and Virtualisation	Virtualisation technologies and cloud computing platforms enable IT support providers to optimise resource utilisation and reduce hardware requirements. By consolidating servers and applications onto virtualised environments or cloud platforms, IT support teams can minimise physical infrastructure, lower energy consumption, and improve scalability and flexibility.
b. Energy Efficient infrastructure	IT support providers can implement energy-efficient hardware and software solutions to reduce energy consumption in data centres and office environments. This includes optimising server configurations, consolidating hardware through virtualisation, and deploying energy-efficient networking equipment. Additionally, IT support teams can promote energy-saving practices among end-users, such as turning off devices when not in use and enabling power-saving settings.
c. Green procurement	When sourcing IT equipment and supplies, IT support providers can prioritise vendors and products with environmentally friendly attributes. This includes selecting energy-efficient hardware, purchasing products with minimal packaging, and choosing suppliers committed to sustainable manufacturing practices. By promoting green procurement, IT support teams contribute to reducing the environmental impact of their operations and supply chains.
<u>Other answers may include:</u> <ul style="list-style-type: none">• Telecommuting and remote work: Encouraging remote support services and telecommuting for IT professionals can significantly reduce the need for travel, thereby lowering carbon emissions associated with transportation. Remote support tools, such as remote desktop software and virtual private networks (VPNs), enable IT technicians to troubleshoot issues and resolve problems without the need for onsite visits.• E-waste management: Sustainable IT support involves responsible handling and disposal of electronic waste (e-waste). IT support providers can facilitate e-waste recycling programs for their clients, collecting and recycling old or obsolete IT equipment to prevent it from ending up in landfills. Additionally, IT support teams can assist clients in extending the lifespan of their IT assets through upgrades, repairs, and refurbishment.• Renewable Energy Integration: Transitioning to renewable energy sources such as solar, wind, and hydropower can significantly reduce the carbon footprint of the ICT industry. Companies can invest in	

onsite renewable energy generation, purchase renewable energy credits, or procure renewable energy from utilities to power their operations.

Question 2

List and explain three [3] environmental guidelines that apply to identifying and resolving client ICT problems.

Your answer must outline:

- the process used when identifying and resolving client ICT problems
- an example of when each guideline is applied
- the benefit of each guideline to the organisation.

[Approximate word count: 50 - 75 words per guideline]

Assessor instructions: Students must explain the impact of each environmental guideline in identifying and resolving ICT problems.

Students are likely to use different wording than the sample answer provided. However, the acceptable responses must:

- be within the specified word limit
- reflect the characteristics described in the exemplar answer.

A sample answer is provided below.

Table 2 - Answer table for Question 2

Environmental Guidelines	How each guideline impacts identifying and resolving ICT problems [50-75 words]
a. Remote troubleshooting and support	<p>IT support utilises remote access tools to diagnose and resolve client ICT issues without onsite visits.</p> <p>For example, when a client reports software errors, IT technicians remotely access the system to troubleshoot and resolve the issue.</p> <p>This guideline reduces travel-related carbon emissions and resource consumption, leading to cost savings and improved efficiency for the organisation.</p>
b. Equipment recycling and disposal	<p>During problem resolution, IT support ensures responsible disposal of replaced equipment through certified e-waste recycling programs.</p> <p>For example, when upgrading computers, IT arranges for proper disposal of old equipment to prevent environmental harm.</p> <p>This minimises e-waste in landfills, complies with environmental regulations, and enhances the organisation's corporate social responsibility. Additionally, it reduces waste disposal costs and improves the organisation's environmental reputation.</p>
c. Recommending energy-efficient solutions	<p>During the identification phase, IT support recommends energy-efficient hardware upgrades to address performance issues.</p> <p>For instance, if a client experiences slow server response times, IT recommends upgrading to energy-efficient servers.</p>

This reduces energy consumption and operational costs, aligning with sustainability goals and enhancing the organisation's environmental reputation.

Other answers may include:

Client Education:

- Throughout the problem-solving process, IT support provides clients with education on environmental considerations related to ICT operations.
- For instance, when addressing software inefficiencies, IT educates clients on energy-saving settings and proper system maintenance. This empowers clients to adopt sustainable practices, such as reducing energy consumption and extending equipment lifespan.
- By raising awareness and promoting eco-friendly behaviors, the organisation fosters a culture of environmental responsibility, benefiting from improved efficiency and reduced environmental impact.

Hardware optimisation:

- During problem resolution, IT support evaluates the client's hardware configuration to maximise efficiency and reduce resource usage.
- For example, when addressing performance issues, IT technicians may optimise server settings or consolidate hardware through virtualisation.
- This improves resource utilisation, reduces energy consumption, and extends equipment lifespan. By optimising hardware, the organisation benefits from cost savings, improved system performance, and reduced environmental footprint.

Energy monitoring and management:

- Throughout problem identification and resolution, IT support implements energy monitoring tools to track and manage energy consumption in client ICT environments.
- For instance, when addressing slow network performance, IT analyses energy usage patterns to identify inefficiencies and optimise equipment settings.
- This proactive approach reduces energy waste, lowers operational costs, and enhances environmental sustainability. By effectively managing energy usage, the organisation benefits from improved efficiency, cost savings, and reduced carbon footprint.

Question 3

Investigate the typical operation of an ICT support function (i.e. help desk or service desk) within an organisation and outline:

- a. the structure of the help desk or service desk operation [Approximate word count: 90 - 125 words]
- b. escalation procedures. [Approximate word count: 90 - 125 words]

Assessor instructions: Students must describe the help desk or service desk structure and escalation procedures.

Students are likely to use different wording than the sample answer provided. However, the acceptable responses must:

- be within the specified word limit
- reflect the characteristics described in the exemplar answer.

A sample answer is provided below.

Table 3 – Answer table for Question 3

Criterion:	Answer: [90 – 125 words]
a. IT support (Help desk or service desk) structure	The ICT support function in a typical organisation usually comprises several tiers. At the frontline, a help desk or service desk handles initial inquiries, troubleshooting, and ticket creation. This tier often includes entry-level support staff providing immediate assistance. Behind them, there's a tier of more specialised technicians or engineers who handle escalated issues that require deeper expertise. Additionally, there may be a management layer overseeing operations, ensuring service level agreements are met, and coordinating with other departments. There are knowledge management systems in place to capture and share information about common technical issues and their solutions. Overall, this hierarchical structure ensures efficient resolution of technical issues and continuous improvement of IT services.
b. Escalation procedures	In a typical ICT support function, escalation procedures involve tiered support levels (Tier 1, 2, 3). Tier 1 resolves basic issues, escalating to Tier 2 for complex problems, and Tier 3 for specialised expertise (e.g. external vendors or developers). Issues are escalated based on predefined triggers like severity or impact. Clear communication and documentation ensure smooth transitions between tiers. Escalation paths, often within an ITSM system, guide the process, with staff following established guidelines. The goal is to resolve technical issues efficiently, leveraging appropriate expertise at each level, and minimising disruption to business operations.

Question 4

Outline each of the listed organisational procedures and explain their application in ICT support.

[Approximate word count: 65 – 90 words per procedure]

Assessor instructions: Students must describe the application of the listed organisational procedures as they relate to providing ICT support.

Students are likely to use different wording than the sample answer provided. However, the acceptable responses must:

- be within the specified word limit
- reflect the characteristics described in the exemplar answer.

A sample answer is provided below.

Table 4 - Answer table for Question 4

Organisational procedures	An outline of the procedure and its application in ICT support [65-90 words per procedure]
a. Problem prioritisation procedures	Problem prioritisation procedures involve assessing reported issues based on severity, impact, and urgency to determine their priority level for resolution. In an ICT support workplace, this ensures that critical issues affecting business operations or customer satisfaction receive immediate attention, while less urgent issues are addressed in a timely manner. By prioritising problems systematically, resources are allocated effectively, response times are minimised, and overall service quality is improved, leading to increased productivity and customer satisfaction.

Organisational procedures	An outline of the procedure and its application in ICT support (65-90 words per procedure)
b. Third-party support and documentation procedures	Third-party support and documentation procedures govern the management of relationships with external vendors and the documentation of support activities. In an ICT support workplace, these procedures ensure that third-party vendors are onboarded effectively, service level agreements are upheld, and incidents are resolved efficiently. Documentation of support activities facilitates knowledge sharing, problem resolution, and performance monitoring. By following these procedures, the organisation maintains transparency, accountability, and effective communication with vendors and stakeholders, enhancing overall support effectiveness.
c. Maintenance procedures	Maintenance procedures involve the systematic upkeep and optimisation of ICT infrastructure, systems, and equipment. In an ICT support workplace, these procedures include preventive maintenance tasks, software updates, hardware inspections, and system backups. Regular maintenance activities help prevent downtime, ensure system reliability and security, and prolong the lifespan of IT assets. By adhering to maintenance procedures, the organisation minimises disruptions, enhances operational efficiency, and protects against potential risks or failures.
d. Preparing maintenance reports and distribution procedures	Maintenance report preparation and distribution procedures involve documenting maintenance activities and communicating them to relevant stakeholders. In an ICT support workplace, these procedures ensure that maintenance tasks are accurately recorded, including details such as tasks performed, equipment inspected, issues identified, and resolutions implemented. Reports may be distributed internally to IT staff, management, and other departments to provide visibility into maintenance activities, track progress, and identify areas for improvement. By documenting and disseminating maintenance reports, the organisation promotes transparency, accountability, and informed decision-making regarding IT infrastructure management.

Question 5

Research the structure of an organisation that provides ICT support to clients by identifying and resolving client ICT problems. Based on your research findings, do the following.

- a. Draw a diagram (chart) of the organisational structure representing:
 - i. relevant positions or departments
 - ii. appropriate reporting or communication pathways
 - iii. hierarchy of support levels 1, 2 and 3.

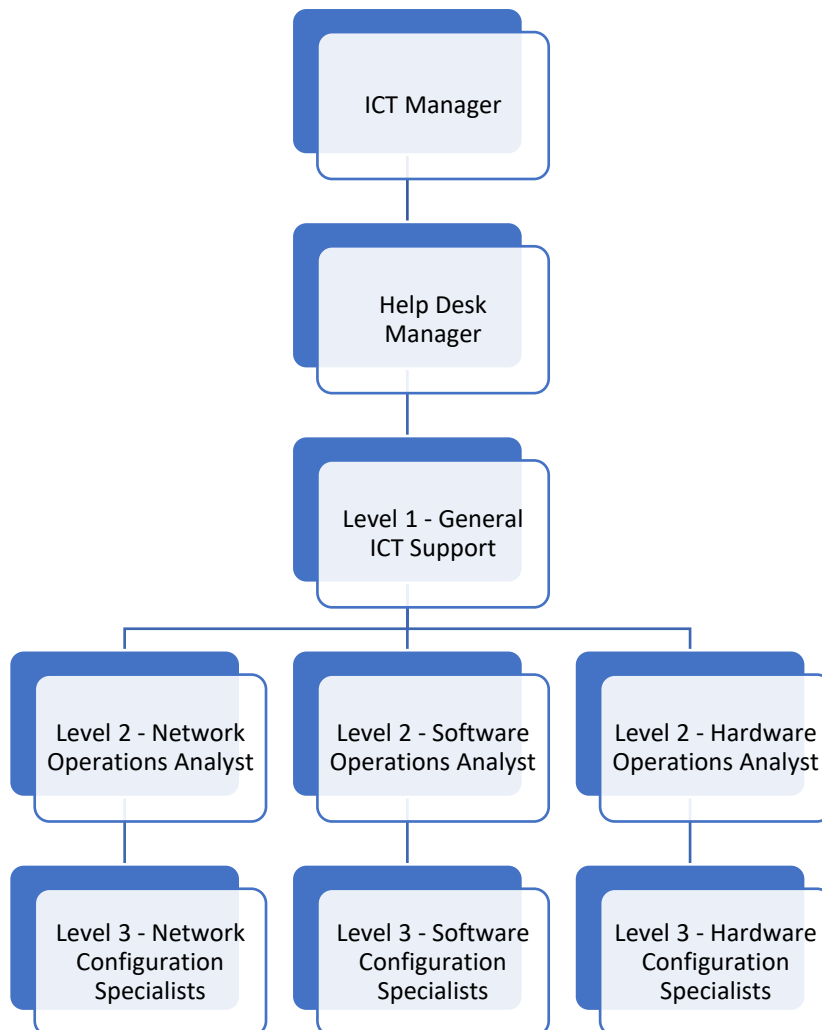
- b. Describe the roles and responsibilities of the positions or departments in the diagram (organisational chart) when providing tiered support. (Approximate word count: 125 – 150 words)

Assessor instructions: Students must demonstrate an understanding of the organisational structure of a workplace that may be relevant to identifying and resolving client ICT problems.

Students are likely to use different wording than the sample answer provided. However, the acceptable responses must:

- be within the specified word limit
- reflect the characteristics described in the exemplar answer.

A sample answer is provided below.



At the top of the organisational structure sits the ICT Manager. Reporting to the IT manager is the ICT Support Manager responsible for overseeing the entire ICT support operations and for setting service level agreements (SLAs), KPIs and performance metrics.

The Level 1 General ICT Support includes help desk technicians and analysts that can provide initial support, handle incoming calls, emails and tickets. They help resolve basic technical issues, troubleshoot hardware/software problems and escalate complex issues to Level 2 support according to the type of issue (i.e. Network, Hardware or Software).

Level 2 Support includes technical specialists that provide in-depth technical support and resolve escalated issues from Tier 1, else escalate complex issues to Level 3 support.

Level 3 Support includes network/software/hardware configuration specialists, who are also subject matter experts (SMEs) who can address complex technical problems, design solutions and provide specialised expertise.

Question 6

Use the following answer table to outline three [3] key functions of an operating system.

[Approximate word count: 15–30 words per function]

Assessor instructions: Students must outline key functions and basic features of an operating system.

Students are likely to use different wording than the sample answer provided. However, the acceptable responses must:

- be within the specified word limit
- reflect the characteristics described in the exemplar answer.

A sample answer is provided below.

Table 5 - Answer table for Question 6

Criterion	An outline of the key functions [15–30 words per function]
Memory management	Overseeing the allocation and deallocation of the system's primary memory to various processes as needed.
Process Management	Managing the creation, execution, and termination of processes, including scheduling CPU time for process execution.
Device management:	Handling the communication between the system and its hardware devices through drivers and managing input/output operations.
Other answers may include:	
<ul style="list-style-type: none">• File system management: Organising, storing, and retrieving data on storage media, and providing a user interface for these operations.• Provides a user interface: Offering interfaces like CLI or GUI for users to interact with the system and execute applications.	

Question 7

Research an enterprise version of an operating system type widely used in the industry and outline three [3] basic features.

[Approximate word count: 65–85 words]

Assessor instructions: Students must outline the features of an operating system.

Students are likely to use different wording than the sample answer provided. However, the acceptable responses must:

- be within the specified word limit
- reflect the characteristics described in the exemplar answer.

A sample answer is provided below.

The operating system researched is Windows 11 Enterprise version, which has the following features:

1. **Accessibility features:** A broader range of accessibility features are available in Windows 11 including live captions.
2. **Improved searches:** Files can be found easily with new contextual suggestions in Windows, powered by Context IQ. The tabs feature enables multitasking in File Explorer.

3. **Automation:** Can automate redundant and manual tasks from the desktop or web browser with Power Automate for desktop.

Reference: [Windows 11 Enterprise | Microsoft 365](https://www.microsoft.com/en-us/microsoft-365/windows/windows-11-enterprise) [Long URL: <https://www.microsoft.com/en-us/microsoft-365/windows/windows-11-enterprise>]

Question 8

Outline three (3) common workplace security and network guidelines and example procedures for each.

[Approximate word count: 15-45 words per guideline/procedure]

Assessor instructions: Students must outline workplace security and network guidelines and procedures.

Students are likely to use different wording than the sample answer provided. However, the acceptable responses must:

- be within the specified word limit
- reflect the characteristics described in the exemplar answer.

A sample answer is provided below.

Table 6 - Answer table for Question 8

Security and network guidelines	An outline of each guideline [15-45 words per guideline]	An outline of example procedures followed in each guideline [15-45 words per guideline]
Employee security awareness guidelines	This involves providing training to employees on security best practices, including recognising and reporting suspicious behaviour, handling sensitive information, and following security protocols.	Conduct regular security awareness training sessions for employees, covering topics such as phishing awareness, password hygiene, and physical security measures. Provide resources and support for employees to report security incidents or concerns.
Data encryption guidelines	Encrypt sensitive data transmitted over the network and stored on devices to protect it from unauthorised access and interception.	Example Procedure: Enable encryption protocols such as SSL/TLS for web traffic, VPN encryption for remote access, and encryption at rest for stored data. Implement encryption policies and guidelines to ensure consistent data protection across the organisation.
User authentication guidelines	Implement strong authentication mechanisms, such as multi-factor authentication (MFA) or biometric authentication, to verify users' identities and prevent unauthorised access.	Example Procedure: Require employees to use MFA when accessing sensitive systems or resources. Regularly review user accounts and permissions to ensure they are aligned with employees' roles and responsibilities.

Assessment submission checklist

Students must have completed all questions within this assessment before submitting. This includes:

1	8 short answer questions completed in the spaces provided.	<input type="checkbox"/>
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Assessment feedback

Assessors are to indicate the assessment outcome as Satisfactory (S) or Not Yet Satisfactory (NYS).

<p>Assessor Name:</p> <p>Date:</p> <p>Assessor comments:</p>	<p><input type="checkbox"/> S <input type="checkbox"/> NYS</p>
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Congratulations, you have reached the end of Assessment 1!

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