T Level Technical Qualification in Digital Support Services

Occupational specialism assessment (OSA)

Cyber Security

Assignment 1

Mark scheme

NCFE

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Contents

Marking guidelines

General guidelines

You must apply the following marking guidelines to all marking undertaken throughout the marking period. This is to ensure fairness to all students, who must receive the same treatment. You must mark the first student in exactly the same way as you mark the last.

- the mark scheme must be referred to throughout the marking period and applied consistently. Do not change your approach to marking once you have been standardised

- reward students positively giving credit for what they have shown, rather than what they might have omitted

- utilise the whole mark range and always award full marks when the response merits them

- be prepared to award 0 marks if the student's response has no creditworthy material

- do not credit irrelevant material that does not answer the question, no matter how impressive the response might be

- the marks awarded for each response should be clearly and legibly recorded

- if you are in any doubt about the application of the mark scheme, you must consult with your team leader or the chief examiner

Guidelines for using extended response marking grids

Extended response marking grids have been designed to award a student's response holistically for the relevant task or question and should follow a best-fit approach. The grids are broken down into bands, with each band having an associated descriptor indicating the performance at that band. You should determine the band before determining the mark.

Depending on the amount of evidence that the task produces, the grids will either be a single, holistic grid that covers the range of relevant performance outcomes (POs), and will require you to make a judgement across all the evidence, or they will consist of multiple grids, that will be targeted at specific POs, and will require you to make a judgement across all the evidence in relation to that particular grid in each case, therefore making multiple judgements for a single task to arrive at a final set of marks. Where there are multiple grids for a particular task, it is important that you consider all the evidence against each of the grids, as although the grids will focus on particular POs, awardable evidence for each grid may come from across the range of evidence the student has produced for the task.

When determining a band, you should look at the overall quality of the response and reward students positively, rather than focussing on small omissions. If the response covers aspects at different bands, you should use a best-fit approach at this stage and use the available marks within the band to credit the response appropriately.

When determining a mark, your decision should be based on the quality of the response in relation to the descriptors. Standardisation materials, marked by the chief examiner, will help you with determining a mark. You will be able to use exemplar student responses to compare to live responses, to decide if it is the same, better or worse.

To support your judgement, the indicative content is structured in such a way that mirrors the order of the different points within the band descriptors. This will allow you to use the two in conjunction with each other by providing examples of the types of things to look for in the response, for each descriptor. In other words, the indicative content provides you with a starting point of possible examples and the bands express the range of options available to you in terms of the quality of the response. You should apply the standards that have been set at relevant standardisation events in a consistent manner.

You are reminded that the indicative content provided under the marking grid is there as a guide, and therefore you must credit any other suitable responses a student may produce. It is not a requirement either that students must cover all of the indicative content to be awarded full marks.

Performance outcomes

This assessment requires students to:

PO1:   Apply procedures and controls to maintain the digital security of an organisation and its data

PO2:   Propose remediation advice for a security risk assessment

PO3:   Discover, evaluate and apply reliable sources of knowledge

Task 1: project proposal

Band	Mark	Descriptor
4	23–30	There is an **excellent,** well-written and **comprehensive** project proposal showing the research that has been undertaken. There are **excellent** and **well-justified** recommendations shown within the proposal demonstrating a **detailed** understanding of software programs currently available and the impact they have on the business. There is a **detailed** explanation demonstrating a **comprehensive** understanding of each software program throughout the comparison task. There is an **excellent** explanation of the legal requirements that need to be addressed when undertaking the installation. There is an **excellent** explanation of the most appropriate ways to implement user access controls.
3	16–22	There is a **clearly** written project proposal showing the research that has been undertaken. There is a **good** justification shown in the recommendations within the proposal that demonstrates a **good** understanding of software programs currently available and the impact they have on the business. There is a **clear** explanation demonstrating a **good** understanding of each software program throughout the comparison task. There is a **good** explanation of the legal requirements that need to be addressed when undertaking the installation. There is a **good** explanation of the most appropriate ways to implement user access controls.
2	8–15	There is a **reasonably** written project proposal showing the research that has been undertaken. There is **some** justification in the recommendations within the proposal that demonstrates a **satisfactory** understanding of software programs currently available and the impact they have on the business. There is a **satisfactory** explanation demonstrating **some** understanding of each software program throughout the comparison task. There is a **reasonable** explanation of the legal requirements that need to be addressed when undertaking the installation. There is a **satisfactory** explanation of the most appropriate ways to implement user access controls.

Band	Mark	Descriptor
1	1–7	There is **a vague** and **very basic** written project proposal showing the research that has been undertaken. There is **basic** justification in the recommendations within the proposal demonstrating a **vague** understanding of software programs currently available and the impact they have on the business. There is a **basic** explanation demonstrating a **vague** understanding of each software program throughout the comparison task. There is a **basic** explanation of the legal requirements that need to be addressed when undertaking the installation task. There is a **basic** explanation of the most appropriate ways to implement user access controls.
0	0	No creditworthy material

Indicative content

The project proposal should be clear with logical steps. It should consider all the software required to secure the device and demonstrate that it has researched the different options available and chosen the best solution based on features, price, and user recommendations. It should consider comparable solutions and justify why a particular product has been chosen as the preferred solution. For example, which anti-virus solution would be best suited when compared with other similar products available? There is no correct solution here, the purpose of the task is to correctly identify the product and show it is well-researched, and that the student can justify their decision to recommend this over other products.

When reviewing the software options, reliable review websites should be used for corroborating brand information which may include:

- CNET
- TechRadar
- IT PRO
- PCMag
- Trustpilot

Credit should be given for recommendations that are well thought out and logical, for example, software suites that include anti-virus, virtual private network (VPN) and firewall (such as Bitdefender) or leveraging existing features of an operating system (such as Windows Defender, Windows Defender Firewall and Windows built-in VPN).

Recommendations should also consider the compatibility of the host operating system (OS). As the OS is not mentioned in the brief this could consider several options, for example Windows or Linux.

Recommendations could suggest using a next-generation firewall (NGFW) security appliance for the solution, for example Cisco FirePOWER 1010 ASA with built-in firewall, VPN and malware defence.

Legal requirements related to the task can include possible licencing issues, software fraud and issues for remote workers related to the Data Protection Act (DPA) 2018 risk, for example being able to manage physical and electronic documents and data accurately in accordance with data protection legislation.

Students may discuss the following as part of methods of implementing user access controls:

- user accounts set up and configured on the personal device

- active directory groups

- strong authentication

- access controls models (for example, role-based-access-control (RBAC)

- restricted privilege access

Note: The above is not an exhaustive list; credit should be given to other suggestions as appropriate to the scenario in the brief

Task 2: set-up – devices, network, and access

Band	Marks	Description
4	16–20	**Excellent** and professional capability demonstrated when completing the installation and configuration of the OS along with correctly configured administration and user accounts. Installation of all the security software tools, which is **thoroughly** evidenced to show that the software is functioning correctly. An **excellent** configuration of all the security software tools, which is **thoroughly** evidenced through scanning. Where any issues are identified, **all** remedial actions have been **effectively** undertaken to rectify this. An **excellent** and **detailed** log demonstrating that the **correct** steps were followed for all software programs that have been installed.
3	11–15	**Good** ability demonstrated when completing the installation and configuration of the OS along with correctly configured administration and user accounts. Installation of all the security software tools, which is **clearly** evidenced to show that the software is functioning correctly. A **good** configuration of all the security software tools, which is **appropriately** evidenced through scanning. Where any issues are identified, **most** remedial actions have been undertaken **appropriately** to rectify this. A **well-written** log demonstrating that **appropriate** steps were followed for all software programs that have been installed.
2	6–10	**Some** ability demonstrated when completing the installation and configuration of the OS along with correctly configured administration and user accounts. Installation of all the security software tools, which is **reasonably** evidenced to show that the software is functioning correctly. A **satisfactory** configuration of all the security software tools, which is **reasonably** evidenced through scanning. Where any issues are identified, **some** remedial actions have been undertaken **satisfactorily** to rectify this. A **satisfactory** log demonstrating **some** steps were followed for all software programs that have been installed.

Band	Marks	Description
1	1–5	**Basic** ability demonstrated when completing the installation and configuration of the OS, along with correctly configured administration and user accounts. Installation of all the security software tools, which has **limited** evidence to show that the software is functioning correctly. A **basic** configuration of all the security software tools, which is evidenced through scanning in a **minimal** manner. Where any issues are identified, **limited** remedial actions have been undertaken. A **basic** log demonstrating a **vague** explanation of the steps followed for all software programs that have been installed.
0	0	No creditworthy material.

Indicative content

Evidence of a successful set up of the computer with Willow Technology's current software programs; this should be a log that details the installation steps, any issues encountered, and remedial actions undertaken. The log may also include:

- screenshots of the software being installed, for example, the OS installation and configuration screen to demonstrate system configuration and the import appliance progress bar to show the installation in progress; there should also be evidence of the machine successfully running, for example, a user logged in to the operating system

- screenshots of the successful set-up of access control for the user and administrator accounts, for example setting up a local administrator account on the supplied device

- screenshots of the firewall being installed/configured, for example, configuration screen in Windows Defender Firewall to demonstrate system configuration

- screenshots of the anti-virus being installed/configured, for example, configuration screen in Windows Defender or other suitable program to demonstrate system configuration

- screenshots of the VPN software being installed/configured; this should include evidence showing the VPN can be activated to ensure privacy and anonymity when the user is accessing the internet via public Wi-Fi.

- screenshots of tools running and the results to demonstrate there are no issues

Note: The above is not an exhaustive list; credit should be given to other suggestions as appropriate to the scenario in the brief

Performance outcome grid

Task	PO1	PO2	PO3	Total
1	10	0	20	30
2	5	10	5	20
Total marks	15	10	25	50
% weighting	30%	20%	50%	100%

Document information

Owner: Head of Assessment Design

Change History Record

Version	Description of change	Approval	Date of issue
v1.0	Post approval, updated for publication		01 June 2023
v1.1	Sample added as a watermark	November 2023	21 November 2023