

Chief examiner's report

**T Level Technical Qualification in
Digital Business Services (Level 3)
(603/6902/4)**

Summer 2023 – Core A and B

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Assessment dates: **Core A – 13 June 2023**

Core B – 20 June 2023

Paper number: **P001856**

P001867

This report contains information in relation to the externally assessed core sub-component provided by the chief examiner, with an emphasis on the standard of student work within this assessment.

The report is written for providers, with the aim of highlighting how students have performed generally, as well as any areas where further development or guidance which may be required to support preparation for future opportunities.

Key points:

- grade boundaries
- standard of student work
- responses to the external assessment questions
- administering the external assessment

It is important to note that students should not sit the core exam until they have received the relevant teaching of the qualification in relation to this sub-component, and that both papers must be taken in any given series that a student sits the core exam.

Grade boundaries

Raw mark grade boundaries for the series are:

	Overall	Notional boundaries	
		Paper A [P001856]	Paper B [P001867]
Max	212	106	106
A*	167	83	83
A	147	74	73
B	127	64	63
C	107	54	53
D	88	44	43
E	69	35	34

Grade boundaries are the lowest mark with which a grade is achieved.

Students receive a grade for the core exam sub-component as whole, and although there are no official grades for the individual assessments in the core exam, it can be useful for students and teachers to see how the core exam grade was achieved. The grade boundaries given for each assessment are known as

'notional grade boundaries', as they are for illustrative purposes only. For further information on notional grade boundaries, please see our guide, T Levels: Notional boundaries for the core exam assessments, available on the qualification page of the NCFE website.

For further detail on how raw marks are converted to uniform marks (UMS), and the aggregation of the Core Component, please refer to the qualification specification.

Standard of student work

The standard of work in this series reflected a continued improvement in the ability of students to recognise the demands of questions, particularly extended writing items, and in general to demonstrate understanding across the full range of unit content on each paper.

Despite these improvements, some specific topics such as testing and project management still prove challenging for candidates, and although the number of questions that are not attempted has declined, there is still a tendency for candidates to give entirely generic answers or answers that are vague and fail to address the question set.

The quality of students' understanding is generally improving and the questions targeting business-related topics on these papers seem to be more likely to elicit a correct answer, but the topics relating to computing tend to garner weaker answers, with students continuing to struggle to demonstrate a secure understanding of topics such as networking, hardware, and protocols.

A broader range of achievement was seen in this series compared to previous sessions, and students were more often able to access the full range of marks on both papers. Analysis of questions in both papers indicates that the questions function well in terms of providing a clear distinction between students that were well prepared for the assessment and those that were less so. A key focus for centres ahead of the autumn examination series should be ensuring that candidates have the relevant knowledge and understanding to allow them to access the full range of marks on this paper.

Providers should ensure that students are able to demonstrate a broad understanding of the specification and that they are able to contextualise their understanding in terms of the full range of firms in the digital sector. An ability to analyse case study data and to make reasoned judgements based on that analysis.

Responses to the external assessment questions

Core paper A

Section A: Culture and context

Performance in this section was generally mixed with students able to pick up some marks on shorter questions but struggling to achieve higher marks on longer questions. Answers remain relatively simplistic in most cases with frequent misunderstandings about different areas of content and generic responses that fail to demonstrate knowledge of the content being assessed.

Question 1 was generally well answered with many candidates able to recognise the potential for automation to lead to a loss of jobs or human empathy in the workplace.

Question 2 was generally not well answered, with many students struggling to clearly demonstrate an understanding of the difference between the public and private sector. Typical wrong answers included generic terms for public sector organisations – for example, school, hospital, generic terms for businesses that might be in either the public or private sector – for example, bank, shop, and other forms of classifying business that might be in either sector, for example, B2B, B2C.

Question 3 required the use of the stimulus material provided to form a response to the question. Many students failed to use this material effectively, with a surprisingly large number of candidates ignoring the statement that the case study business would migrate its whole workforce to full-time home working and suggesting in their answers that isolation could be solved by having a minimum number of days per week in the office. Many answers failed to gain marks because students failed to fully explain their answers. The discuss command verb requires candidates to make a point and develop it. This development must be in context in order to achieve full marks.

Question 4 represents the first example of a new style of question that may be used in these papers going forward. Part (a) requires students to identify mitigation techniques that could be used to reduce problems associated with long periods of screen use. Most students were able to correctly identify examples such as rest breaks or screen filters. Many students described these mitigation techniques rather than just identifying them, wasting time. Candidates should be prepared for these exams in such a way that they recognise the demands of command verbs such as identify and describe so they can use their time efficiently.

Part (b) required candidates to explain why one of the mitigation techniques they had identified would work. This required students to make a point and develop it for their first mark, and then provide a linked point with further development for their second mark. Many candidates simply repeated some or all of their answers to part (a) for this question, which unfortunately could not be awarded any marks. In future series, candidates should be prepared for this type of question with an awareness that repeating material from part (a) will not gain any marks on part (b) of this type of question.

Question 5 represents another example of this new style of question. Part A asks students to identify stakeholders that might affect a business based on a piece of data. Part B requires candidates to expand on how these stakeholders might be affected by the business. Most candidates were able to correctly identify two relevant stakeholders in part A. In part B, while some students were able to make a relevant developmental point about how these stakeholders might be affected by the business, relatively few were able to analyse their point in sufficient depth to achieve a second mark. Candidates should remember that on a question such as this, the 'describe' command verb requires that candidates make a contextualised, developed point for each mark and that those points should be linked. A number of students made similar errors on part B. Some candidates simply listed points that might exemplify an impact on a stakeholder without any development or contextualisation. In those cases, no marks could be achieved. In other cases, students tried to describe the impact of the stakeholder on the business. Again, this did not lead to any marks.

Question 6 provided students with data about a food manufacturing business. Students needed to explain how the business might be affected by two economic factors. The factors identified in the case study were interest rates and recession. These were the only correct answers. Many students incorrectly listed other factors such as inflation. On a question such as this one, answers should be based on the data provided, therefore, if a factor not covered by the data is given as a response, it cannot be awarded any marks. In many cases, students failed to show any understanding of interest rates or recession. Students tended to give relatively simplistic answers indicating that the factors were bad and that they would bankrupt the business. At this level, students should be able to demonstrate a more nuanced understanding of such issues and as such needed to show a clear cause and effect relationship between the economic factor and other issues in the case study – for example, higher interest rates might lead to higher repayments on the large loans taken out by the business. Without that level of development, no marks could be awarded.

Question 7 required students to demonstrate their understanding of how a data technician could use quantitative and qualitative data in making a business decision. Answers needed to be applied to the context of a chocolate manufacturer in order to be awarded marks. In most cases, students were not able to demonstrate sufficient understanding of the uses of either quantitative or qualitative data. Many responses

included very simplistic comments such as ‘...make graphs and charts so they are easy to understand...’ such responses are too simplistic at this level and have no clear link to context and thus could not be awarded any marks. Candidates needed to suggest examples of each type of market research and explain how these could be used in the technician’s report. For example, the case study points out that the business is collecting customer feedback. Candidates could have identified this as qualitative, suggested that the technician identify commonly occurring words and phrases and then explained how that analysis of the data could be used to inform decisions about what to remove from boxes of chocolates – for example, if the data indicated that certain flavours were always associated with negative words in customer feedback this might indicate that they would be a good choice for removal as customers might not like them.

Question 8 required candidates to assess the value of digitalisation for a manufacturing firm. Students tended to fail to demonstrate any understanding of the concept of digitalisation or how this might be applied to manufacturing. For example, they could have talked about the benefits of being able to monitor and control production lines from using KPI data that is updated on a live basis, using sensors on a production line to ensure that quality standards are met. To access all three marks on this question, students had to make three linked points, all of which had to be developed once in context. Some candidates were able to make a basic point about monitoring production remotely, but few were able to fully recognise the demands of the question and were unable to gain any further marks.

Question 9 required candidates to show an understanding of how the processes used by a software company might be affected by digitalisation. Few candidates seemed to have any understanding of the concept of a process and most lacked a clear understanding of the concept of digitalisation meaning that few candidates were able to gain any marks for this question. In order to gain any marks, candidates would need to identify an aspect of the businesses’ activities, such as carrying out research and then show how this might be digitalised – for example, the process for gathering data may change from a member of staff searching online repositories to the deployment of an algorithm to trawl through these resources. This question tended to elicit a lot of simplistic answers that suggested that digitalisation would simply make things quicker or cheaper. In order to gain credit, students would need to show a contextualised link between something being cheaper and that activity being digitalised.

Question 10 was the first of two extended writing items on this paper. This question required candidates to discuss the change management preparation and planning that a logistics firm should undertake to implement a new system. In most cases, students were able to demonstrate basic knowledge of change management, but few were able to analyse or contextualise their answers, leading to many responses being placed in mark band 1 or 2. Few candidates demonstrated a detailed understanding of the concept of change management. Candidates needed to demonstrate an ability to analyse and evaluate the issue, in context in order to achieve higher marks. For example, they should have presented different approaches to planning the change and made some judgement about which might be most appropriate.

Section B: Diversity and digital environments

Question 11 required candidates to give one piece of hardware in a computer network. This meant that they needed to name an item of hardware that is specific to a network such as a switch. A significant minority of candidates named generic computer components such as a hard disk drive or a CPU. This is not a piece of hardware used specifically in a network and thus was not a correct answer.

Question 12 required candidates to identify a suitable method of storing a large quantity of photographs. Most candidates correctly suggested methods such as cloud storage or a hard disk drive. A significant minority gave ‘USB’ as an answer. This is an incorrect answer as this is a form of interface, not a storage medium in and of itself.

Question 13 required candidates to identify a method of addressing demographic imbalance. This was generally well answered with most candidates giving an answer such as inclusive recruitment.

Question 14 required students to identify a benefit of virtual machines in part A and then to explain how that benefit would impact on the case study business in part B. A majority of candidates got this question wrong because they confused virtual machines with forms of cloud computing. Although machines can be virtualised in cloud platforms, this was not something that students considered, instead many answers related to generic benefits of cloud storage such as it being cheap/free or being able to expand the amount of storage used. Where students got part A wrong, they almost inevitably got part B wrong. Answers should have related to a benefit of virtual machines such as not needing to invest in new hardware as frequently due to processing and memory requirements being met on a server. This would then have given students the opportunity to note that this will help the business to meet its environmental objectives.

Question 15 required candidates to describe two email protocols. While many candidates were able to identify protocols such as POP3 or SMTP, they could not describe them. While some candidates made generic comments such as 'it sends emails', this was not sufficient detail to be awarded any marks.

Question 16 required candidates to assess the most suitable type of internet connection for an e-sports team. Candidates tended to lack any understanding of the characteristics of either type of network and consequently were not able to use those characteristics as the basis for a judgement. While some candidates were able to comment on the significance of factors such as the level of latency affecting network traffic and how this might affect gaming, most lost marks because they simply made generic, uncontextualized comments about one type of network being 'good', 'cheap' or 'fast' without any explanation as to why.

Question 17 required candidates to consider the benefits of a resilient digital environment in the context of a manufacturing firm. While more candidates seem able to demonstrate an understanding of the concept of a resilient digital environment than in previous series, a large number still seemed unable to give an answer in context, so while many candidates were able to achieve marks on part A by identifying the benefits of digital resilience, few were able to link those benefits to the issues in the case study such as the ability to prevent data theft. Candidates should be prepared for items such as this and should be aware that, in order to gain marks on a question with a case study, they should link their response to that case study, otherwise they will not be awarded any marks.

Question 18 required candidates to explain two ways that a law firm might be affected by the Equality Act 2010 in terms of allowing staff to work flexibly. Many students noted that the staff in the business were from diverse religious backgrounds, gaining a mark for noting that flexibility was necessary so those staff could attend religious festivals. Candidates also noted that flexibility might be needed to accommodate parents or to provide care to sick relatives. While students were often able to gain an initial mark for explaining a basic point, few were able to gain development marks for building on their initial explanation. Candidates should be aware that they need to build a substantial chain of reasoning, containing at least four links, which is fully contextualised for each of the two points they identify to gain 4 marks for a question like this.

Question 19 required candidates to assess the impact of diversity and inclusion on a training business. While many candidates were able to accurately explain a benefit of diversity, such as making the business a more attractive workplace and thus increasing the number of people willing to apply for jobs in the future – in order to gain one mark – few candidates were able to develop that point any further by examining the extent to which that impact might be positive or not for the business. Relatively few answers were fully contextualised. As a result, candidates often struggled to gain more than one mark for this question. A high level of analysis and evaluation is required for a question like this, with students expected to present a chain of reasoning that is at least six marks long and fully contextualised to achieve full marks on this question.

Question 20 required students to assess the extent to which offering people a free qualification might help a business become more digitally inclusive. Many students missed the point of this question and wrote about how the qualification would make the industry or society in general more inclusive. In order to achieve full marks for this question, the candidate needed to show how offering this qualification might make a business that provides illustration services more inclusive – for example by highlighting that a digital divide exists with people from poorer backgrounds less likely to be able to study for such qualifications – by this could have been assessed by noting that art related computer equipment such as touchscreen devices and styluses might still be expensive, limiting the impact that this qualification might have. Instead, candidates largely gave simplistic answers stating that ‘more’ people could ‘learn skills’ and that this would make the business more diverse.

Question 21 was the second extended writing item on this paper. This question required candidates to analyse the extent to which the introduction of cloud computing would make a fashion brand more digitally resilient. This required candidates to make judgements about the extent to which cloud computing would impact on the business – for example noting that over-reliance on cloud platforms might make the company susceptible to issues with broadband connections, despite the benefits of systems such as cloud storage providing a scalable and reliable backup system. Few students analysed these issues in any depth with most making relatively simplistic points. A common misconception was that cloud computing is free. Many students talked about applications with which they are familiar such as Google Drive. In those cases, students tended to lack the depth of analysis needed to achieve higher mark bands as students tended to lack knowledge of both cloud computing and digital resilience and were rarely able to show or question a causal link between the former and the latter.

Section C: Learning and planning

This section was, for most candidates, the weakest part of the paper, and topics such as project management remain areas of content where candidates seem relatively unprepared for the assessment.

Question 22 required candidates to give two principles of project planning. A large portion of the responses seen did not do this, instead making more general points such as budgeting or profit. Candidates seemed largely unaware of the principles that underpin project planning.

Question 23 seemed especially challenging for students. While most were able to identify a source of information that could be used without a computer, few seemed able to provide any attributes or characteristics of these sources of information by way of a description and consequently were those candidates were unable to achieve any marks for this question. Candidates should be aware of the demands of different command verbs and should be trained to recognise that a description requires them to detail the features or characteristics of something.

Question 24 was generally not well answered by candidates. Few seemed to be able to demonstrate a knowledge of critical path analysis. Most answers made generic points that could be loosely attributable to any project management (or indeed management) technique. Points such as ‘It will mean Yassin meets their goals...’ or ‘...the project will be well organised...’ did not show any knowledge of critical path analysis and consequently were not awarded any marks. For this question, candidates needed to use their knowledge of this technique, for example, by explaining that the directors of the business would be able to identify dependencies within the project or that they could redirect resources in order to ensure that critical activities were completed on time. Questions such as this require a contextualised answer, in this case, related to the manufacture of homeware using digital technology. Answers should have related to the streamlining of that process.

Question 25 required candidates to apply their knowledge of Gibb's reflective learning cycle to the example of a designer who is new to the digital economy. Few candidates were able to earn marks for this question as they were unable to demonstrate a knowledge of the analysis stage of the learning cycle. Most candidates simply made a generic point about learning from experience or reflecting on an experience. In order to gain marks, candidates needed to consider how the worker in the case study data could make sense of her experience of learning through mediums such as MOOCs. For future series, candidates should aim to familiarise themselves with the different learning models and practice applying the stages of these models to different scenarios.

Question 26 required candidates to explain why a drone might be useful for the completion of the design of a project. Most candidates were able to make good use of the context to explain that the ability of the drone to capture images at a greater altitude might mean a perspective that would not be possible using traditional methods, earning one mark, but few candidates were able to develop this point further to earn a second mark by providing an additional contextualised argument with development.

Question 27 required candidates to assess the impact on the staff of a law firm of maintaining their professional development. Some candidates were able to point to the rapid evolution of knowledge in this industry and the need for workers to update their skills constantly in order to remain employable or perform well in their jobs. The best responses used examples such as a rapid change in how streaming technology works and the need for lawyers to be up to date with this. A large number of candidates made a basic error in their responses to this question, assessing the impact on the business of having staff complete CPD activity. This meant that those candidates were not able to earn any marks as they had focused on the wrong aspect on this question. Centres should ensure that candidates are prepared to read each question carefully and that they can identify the requirements of the question – for example, either their answer should focus on staff, customers, the business, its owners or some other stakeholder group.

Question 28 focused on the building of an animal enclosure and the role of project management in ensuring that this goal is achieved. Most candidates were able to gain at least one mark for part A by identifying generic consequences of poor project planning such as budget overruns. Some candidates were able to explain how this might impact on the success of the project, with a number of responses making good use of the context to point out that the enclosure might not be finished in time for the arrival of its residents.

Question 29 required students to identify an emerging technology and to explain how it could be used to help people with additional needs travel the world from their own home. Most candidates were able to identify an appropriate technology such as AR or VR, gaining a mark for part A, but relatively few were able to demonstrate any knowledge of how this technology works, in the context of travel for those with additional needs, in order to gain any marks for part B.

Question 30 required candidates to demonstrate their knowledge of budgeting by discussing how this might affect a design business if it is done effectively. Few candidates were able to demonstrate any understanding of the implications of effective budgeting. Some candidates made generic points such as suggesting that budgeting might help control spending, but a lack of contextualisation meant that they were not able to gain any marks. Many candidates made basic mistakes, such as suggesting that budgets might be used to measure profit.

Core paper B

Section A: Tools and testing

Overall, this section proved challenging for candidates, with many struggling to demonstrate knowledge of the concepts assessed, particularly testing, which continues to be an area that proves difficult for many candidates. Responses often reflected a muddled understanding of topics, with similar ideas being substituted for one another incorrectly.

Question 1 required candidates to give a definition of concept testing. Few candidates were able to do this. Most responses seemed to relate to penetration testing or stress testing. In preparation for future series, candidates should be taught the full range of testing methods from the specification and they should be familiar with how these methods can be used. For example, amongst other things, they should be able to define each method, outline its strengths and weaknesses and explain how it might be used in different scenarios.

Question 2 required candidates to give one use of a budget sheet. Few candidates were able to do this. Most made basic errors such as suggesting that they might be used to record or calculate profits.

Question 3 required candidates to describe black box testing and to explain how a case study business in the fashion industry might use it. As with question 1, few candidates were able to do this, with many confusing black box testing with stress testing or penetration testing. While some candidates were able to demonstrate enough knowledge in part A to gain a mark, it was rare to see any responses to part B that were worthy of a mark. This is because candidates tended to describe a different type of testing for part A and thus their explanations in part B were irrelevant to the question.

Question 4 required candidates to identify two stages in the process of root cause analysis and then explain how one of these stages could be used to solve a problem in the implementation of a new booking system. While many students were able to state the name of one or more stages in the process of root cause analysis, earning a mark for part A, few were able to apply that stage of the model to the issues involved in setting up a new booking system, consequently, many students did not get any marks for part B. A significant minority of answers to part A identified tools that might be used as part of root cause analysis, such as a fishbone diagram. As such, candidates making this error in part A were not able to gain any marks in part B either as they gave an explanation that was not relevant to the question.

Question 5 required candidates to identify two evaluation tools and explain how one of these might be appropriate for the needs of a logistics company that is expanding. Most candidates were unable to name any evaluation tools. A wide range of misconceptions were seen in answers to this question, but the most common was to identify visualisation tools such as dashboards. Candidates should be prepared to sit this assessment with a demonstrable awareness of the different tools that can be used to process, display and evaluate data. Candidates should be able to identify, describe and explain the use of a range of each.

Question 6 required candidates to demonstrate knowledge of the lean framework in the context of a business that provides health services. While some students were able to earn one mark for describing one way of eliminating waste, for example by making better use of server capacity. Few candidates were able to provide an explanation of a second point or to further develop the first point. Candidates should be prepared to make detailed contextualised developments of each point they make.

Question 7 required students to assess the usefulness of usability testing to a firm in the retail sector. Some candidates were able to show a basic awareness of the concept of usability testing by explaining that features might need to be tested in different web browsers or on different operating systems to check that there is a consistent user experience. Candidates tended to get only achieve one mark because they did not develop their points in depth and their answers were not contextualised.

Question 8 required candidates to discuss the use of discussion threads as a collaborative tool in the context of a community group. Candidates tended to make good points, such as the ability to gather multiple views and to allow participants to respond to each other. But candidates also tended not to develop those points thus limiting the marks they could be awarded as they had not presented a detailed discussion. The discuss command verb usually requires some degree of evaluative writing. Good responses to this question that gained two or three marks, developed an initial benefit of discussion threads by comparing them to other, potentially more appropriate, collaborative tools.

Section B: Legislation and security

Question 9 required candidates to identify two technical threats to a business. Most candidates were able to give accurate answers by citing examples of malware or types of hacking. Some candidates confused hacking, which is a technical threat, with hackers, who are the instigator of technical threats, but not a technical threat in and of themselves.

Question 10 required candidates to identify two features of a human rights act, one of which should have been explained in the context of how it protects staff at a law firm. Most candidates were able to identify at least one aspect of the legislation, gaining a mark in part A, before giving a partially accurate contextualised explanation in part B, gaining another mark. Candidates were generally able to pick up on, for example, clues in the case study that the right to privacy of workers might not be respected by managers asking intrusive questions. They could often give a basic explanation of how the law protected workers in this respect.

Question 11 required candidates to identify two industry standards and explain how one might be beneficial to a consultancy business. Part A yielded many correct answers, with candidates showing a greater awareness of the different standards than in previous series. Part B also led to some good answers with candidates making good use of the data in the case study to explain how industry standards may be relevant to, for example, accepting online payments.

Question 12 required candidates to explain a reputational consequence of breaking a confidentiality agreement. Many candidates were able to explain the potential loss of trust and subsequent loss of revenue that may stem from this, but few were able to develop that point further. A common misconception in this question was to write about the legal consequences of breaking the agreement such as having to defend against a civil action. Students should be reminded of the need to read questions carefully and to identify the correct focus for their answers.

Question 13 required candidates to demonstrate an understanding of codes of conduct. Few candidates were able to do so. Most gave generic answers about the benefits of customer service or answers related to industry standards or consumer law.

Question 14 required candidates to assess the impact of using commercially sensitive information for an accounting firm. Few candidates were able to identify relevant examples of commercially sensitive information or to explain how the use or misuse of this might have consequences. Some candidates were able to gain a mark by discussing the implications of misusing this type of data – for example, by not securing it correctly.

Question 15 required candidates to assess the usefulness of multifactor authentication to a business that manufactures clothes. A common error by candidates on this question was simply to describe the process of multifactor authentication without making any judgement on its usefulness. A small number of candidates recognised that the business had already suffered an issue of passwords being exposed and explained that having a second security method would reduce the risk of this leading to further data breaches, but most

could not assess the issue in any greater depth and thus were unable to get more than one mark for this question.

Question 16 required candidates to assess the significance of three different threats to client data at a legal services company. This question tended to elicit relatively superficial responses from candidates who tended to simply go over the list of possible risks and make simplistic comments about why they might be bad – for example ‘encryption should be up to date so your computer can’t be hacked.’ Such answers fell well short of the level of evaluative comment required in response to the assess command verb. For questions such as this, candidates should pick one bullet point and focus on the issues raised by it. Addressing each point in turn is likely to lead to a superficial answer that gains, at best, only a single mark.

Question 17 was an extended response item that asked students to discuss the approaches that a business could take to risk mitigation. Candidates generally gained marks for describing methods of risk mitigation, but these answers tended not to be in context and rarely contained evidence of evaluation or analysis, thus answers tended to be placed in mark band one or two. Candidates should prepare for future series by writing extended essays that focus on fewer arguments in greater depth.

Section C: Digital analysis and data

Question 18 required candidates to pick option B – Attribute based access control. Most candidates correctly picked this option, but a few chose options A or C.

Question 19 required candidates to define the term finiteness. Most were able to give an answer indicating that an algorithm might have a limited number of steps involved. This represented a slight improvement in the ability of students to demonstrate understanding of algorithms compared to previous series.

Question 20 required candidates to give a source of external data. Most were able to correctly give at least one, with government data or customer data being the most common answers.

Question 21 required candidates to consider how a college might use pattern recognition to address traffic problems. Most candidates were able to make a basic point about identifying when volumes of traffic were greatest and to link this to an action relating to traffic calming, gaining one mark, but few candidates were able to go into greater depth to earn a second mark.

Question 22 required candidates to consider why pseudo code might be an appropriate medium to present a plan for an algorithm to a non-technical audience. Few candidates were able to correctly answer this question, with many making simplistic comments such as ‘It’s going to be easy to understand because it’s not code’. Another common error, made by a large number of candidates, was to suggest that pseudo code involves writing plan in ‘plain English that everyone can read’ – which is not sufficiently correct to justify awarding a mark.

Question 23 required candidates to identify two features of a flowchart and to explain why this method was a suitable method for designing algorithms for an apprentice. Most candidates gained at least one mark in part A by naming the blocks in a flow chart. Answers such as terminator and decision were common responses. Few candidates were able to answer part B correctly, with many candidates misunderstanding the question and assuming that the apprentice mentioned in the scenario would be following a flow chart in designing algorithms. A large number of answers to part B were very simplistic and lacked any specific knowledge of flow charts. The most common answer was a variation on ‘it’s easy’. At this level candidates should be aware that answers require the use of relevant unit content, and for that material to be used in a more sophisticated way.

Question 24 required candidates to identify two elements of the entity relationship model and to explain why this model was beneficial to a school when planning its timetable. Most candidates were able to get at least

one mark in part A, but few candidates were able to accurately answer part B. Most responses simply made generic comments about the model making it easy to design timetables without showing any awareness of the design of a database and how this could be relevant to a task such as allocating resources like classrooms and teachers.

Question 25 required students to assess the impact of machine learning on the processes used by a data analytics business. This question tended to yield relatively simplistic answers that demonstrated relatively limited understanding of machine learning. Most candidates simply suggested that this type of algorithm would make work quick or cheap, without showing how this could be achieved.

Question 26 required candidates to assess the impact that algorithms would have on the clients of an accounting firm. Few candidates showed any understanding of how this type of business might use an algorithm. Most answers simply talked about work being done faster or without errors without analysing how this might happen.

Question 27 required candidates to explain a type of user permission and to discuss how much impact these might have on the security of a consulting business. Few candidates could name a user permission, but some managed to get a mark in part A by describing one – for example, by explaining that some user permission only allows you to access data relevant to your job role. Many candidates confused user permissions with file permissions, with many answers suggesting that, for example, files could be made read only. Where candidates got part A wrong, they tended to get part B wrong as a consequence. Many answers for part B simply repeated part A and thus could not be given any additional marks.

Question 28 generally elicited some good answers from candidates with many able to evaluate the use of loyalty card data in the launch of new baby products in depth. Many candidates were able to link the use of this data to relevant marketing activities such as targeted advertising. In general, candidates analysed and evaluated effectively in context for this question.

Administering the external assessment

The external assessment is invigilated and must be conducted in line with our [Regulations for the Conduct of External Assessment](#).

Students must be given the resources to complete the assessment, and these are highlighted within the [Qualification Specific Instructions for Delivery \(QSID\)](#).