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# **GCE AS MARKING SCHEME**

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**SUMMER 2024**

**AS  
DIGITAL TECHNOLOGY - UNIT 1  
2540U10-1**

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## About this marking scheme

The purpose of this marking scheme is to provide teachers, learners, and other interested parties, with an understanding of the assessment criteria used to assess this specific assessment.

This marking scheme reflects the criteria by which this assessment was marked in a live series and was finalised following detailed discussion at an examiners' conference. A team of qualified examiners were trained specifically in the application of this marking scheme. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners. It may not be possible, or appropriate, to capture every variation that a candidate may present in their responses within this marking scheme. However, during the training conference, examiners were guided in using their professional judgement to credit alternative valid responses as instructed by the document, and through reviewing exemplar responses.

Without the benefit of participation in the examiners' conference, teachers, learners and other users, may have different views on certain matters of detail or interpretation. Therefore, it is strongly recommended that this marking scheme is used alongside other guidance, such as published exemplar materials or Guidance for Teaching. This marking scheme is final and will not be changed, unless in the event that a clear error is identified, as it reflects the criteria used to assess candidate responses during the live series.

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**WJEC GCE AS DIGITAL TECHNOLOGY – UNIT 1**  
**INNOVATION IN DIGITAL TECHNOLOGY**  
**SUMMER 2024 MARK SCHEME**

Question	Answer	AO1	AO2	Total Mark										
1	<p>Rob is starting a company and will need his employees to sit in front of a desktop PC for up to 7 hours a day.</p> <p>(a) Advise Rob on what health risks can arise from sitting in front of a computer for long periods of time and how these issues can be mitigated.</p> <p><b>Indicative content:</b></p> <p>Risks:</p> <ul style="list-style-type: none"> <li>• Eye strain: dry, irritated eyes, blurred vision, headaches</li> <li>• Neck and back pain: strain on neck, shoulders, and back</li> <li>• Carpal tunnel syndrome: pain, numbness, tingling in hand and fingers</li> </ul> <p>To mitigate these risks:</p> <ul style="list-style-type: none"> <li>• Take regular breaks to stretch and move around</li> <li>• Set up workstation ergonomically (e.g. position monitor at comfortable distance and height, use chair with good lumbar support, keep keyboard and mouse at level that allows wrists to remain straight)</li> <li>• Adjust chair and desk to a comfortable position that promotes good posture</li> </ul> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Band</th> <th style="text-align: center;">AO2</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><b>3</b></td> <td> <p style="text-align: center;"><b>5-6 marks</b></p> <p>A very good discussion, which shows:</p> <ul style="list-style-type: none"> <li>• thorough knowledge and understanding of the potential risks of using a PC</li> <li>• a confident grasp of how to mitigate the risks</li> </ul> </td> </tr> <tr> <td style="text-align: center;"><b>2</b></td> <td> <p style="text-align: center;"><b>3-4 marks</b></p> <p>A good discussion, which shows:</p> <ul style="list-style-type: none"> <li>• generally secure knowledge and understanding of the potential risks of using a PC</li> <li>• a generally secure understanding of how to mitigate the risks</li> </ul> </td> </tr> <tr> <td style="text-align: center;"><b>1</b></td> <td> <p style="text-align: center;"><b>1-2 marks</b></p> <p>A basic discussion, which shows:</p> <ul style="list-style-type: none"> <li>• some knowledge and understanding of the potential risks of using a PC</li> <li>• some grasp of how to mitigate the risks</li> </ul> </td> </tr> <tr> <td></td> <td> <p style="text-align: center;"><b>0 marks</b></p> <p>Response not creditworthy or not attempted.</p> </td> </tr> </tbody> </table>	Band	AO2	<b>3</b>	<p style="text-align: center;"><b>5-6 marks</b></p> <p>A very good discussion, which shows:</p> <ul style="list-style-type: none"> <li>• thorough knowledge and understanding of the potential risks of using a PC</li> <li>• a confident grasp of how to mitigate the risks</li> </ul>	<b>2</b>	<p style="text-align: center;"><b>3-4 marks</b></p> <p>A good discussion, which shows:</p> <ul style="list-style-type: none"> <li>• generally secure knowledge and understanding of the potential risks of using a PC</li> <li>• a generally secure understanding of how to mitigate the risks</li> </ul>	<b>1</b>	<p style="text-align: center;"><b>1-2 marks</b></p> <p>A basic discussion, which shows:</p> <ul style="list-style-type: none"> <li>• some knowledge and understanding of the potential risks of using a PC</li> <li>• some grasp of how to mitigate the risks</li> </ul>		<p style="text-align: center;"><b>0 marks</b></p> <p>Response not creditworthy or not attempted.</p>		6	6
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	<p>(b) Rob has been advised that a touch sensitive interface is the best option for visitors to use when signing in at reception. Evaluate this advice.</p> <p><b>Indicative content:</b></p> <p>Advantages:</p> <ul style="list-style-type: none"> <li>• User-friendly/Intuitive</li> <li>• No need for a keyboard or mouse</li> <li>• Convenient/Can be adjusted or rotated to suit user</li> <li>• Customisation – Fit a specific need – Designed with clear instructions and simple navigation</li> </ul> <p>Disadvantages:</p> <ul style="list-style-type: none"> <li>• Potential for germs to be transferred</li> <li>• Not all users may be familiar with or comfortable using touchscreens</li> <li>• Can be less accessible for individuals with certain disabilities</li> </ul> <table border="1"> <thead> <tr> <th>Band</th> <th>AO2</th> </tr> </thead> <tbody> <tr> <td>3</td> <td> <p style="text-align: center;"><b>5-6 marks</b></p> <p>A very good discussion, which shows:</p> <ul style="list-style-type: none"> <li>• thorough knowledge and understanding of the advantages and disadvantages of touch sensitive interfaces</li> <li>• a confident grasp of how these apply to company using a touch sensitive interface for guests in reception</li> </ul> </td> </tr> <tr> <td>2</td> <td> <p style="text-align: center;"><b>3-4 marks</b></p> <p>A good discussion, which shows:</p> <ul style="list-style-type: none"> <li>• generally secure knowledge and understanding of the advantages and disadvantages of touch sensitive interfaces</li> <li>• a generally secure understanding of how these apply to company using a touch sensitive interface for guests in reception</li> </ul> </td> </tr> <tr> <td>1</td> <td> <p style="text-align: center;"><b>1-2 marks</b></p> <p>A basic discussion, which shows:</p> <ul style="list-style-type: none"> <li>• some knowledge and understanding of the advantages and disadvantages of touch sensitive interfaces</li> <li>• some grasp of how these apply to company using a touch sensitive interface for guests in reception</li> </ul> </td> </tr> <tr> <td></td> <td> <p style="text-align: center;"><b>0 marks</b></p> <p>Response not creditworthy or not attempted.</p> </td> </tr> </tbody> </table>	Band	AO2	3	<p style="text-align: center;"><b>5-6 marks</b></p> <p>A very good discussion, which shows:</p> <ul style="list-style-type: none"> <li>• thorough knowledge and understanding of the advantages and disadvantages of touch sensitive interfaces</li> <li>• a confident grasp of how these apply to company using a touch sensitive interface for guests in reception</li> </ul>	2	<p style="text-align: center;"><b>3-4 marks</b></p> <p>A good discussion, which shows:</p> <ul style="list-style-type: none"> <li>• generally secure knowledge and understanding of the advantages and disadvantages of touch sensitive interfaces</li> <li>• a generally secure understanding of how these apply to company using a touch sensitive interface for guests in reception</li> </ul>	1	<p style="text-align: center;"><b>1-2 marks</b></p> <p>A basic discussion, which shows:</p> <ul style="list-style-type: none"> <li>• some knowledge and understanding of the advantages and disadvantages of touch sensitive interfaces</li> <li>• some grasp of how these apply to company using a touch sensitive interface for guests in reception</li> </ul>		<p style="text-align: center;"><b>0 marks</b></p> <p>Response not creditworthy or not attempted.</p>		6	6
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	<b>Accept any other reasonable positive and negative impacts.</b>				
3	(a)	<p>Machine Learning is a subset of Artificial Intelligence. Describe Machine Learning and how it differs from traditional algorithms used in Artificial Intelligence</p> <p>Award <b>one</b> mark for a limited response, for example: Machine Learning (ML) is where the machine learns from experience.</p> <p>Award <b>two</b> marks for a basic response, for example: ML algorithms are able to learn from data and experience. In contrast, traditional algorithms used in AI are based on certainties and not probabilities.</p> <p>Award <b>three</b> marks for a more developed response, for example: Machine Learning (ML) algorithms can adapt without following explicit instructions. ML algorithms are able to learn from data and experience, allowing them to make predictions and decisions without being explicitly programmed to do so. In contrast, traditional algorithms used in AI are based on pre-set instructions that are not able to adapt or improve based on new data or experiences.</p>	3		3

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(b)	<p>Describe supervised, semi-supervised, and unsupervised learning within the context of Machine Learning.</p> <p><b>Indicative content</b></p> <p>Supervised learning</p> <ul style="list-style-type: none"> <li>The training data is labelled with the correct output, and</li> <li>the algorithm learns to predict the correct output for new data based on the patterns it discovers in the training data.</li> </ul> <p>Semi-supervised learning</p> <ul style="list-style-type: none"> <li>The training data is partially labelled, with some examples having the correct output and others not.</li> <li>The algorithm is still able to learn from this data, but it may not be able to perform as well as it would with fully labelled data.</li> <li>Feedback is an important component in semi-supervised learning.</li> </ul> <p>Unsupervised learning</p> <ul style="list-style-type: none"> <li>The training data is not labelled at all, and the algorithm must discover the underlying patterns in the data on its own.</li> <li>This is often more challenging than supervised or semi-supervised learning, but it can be useful for finding hidden structures in the data.</li> </ul> <table border="1"> <thead> <tr> <th>Band</th> <th>AO1</th> </tr> </thead> <tbody> <tr> <td>3</td> <td> <p><b>5-6 marks</b></p> <p>A very good description, which shows:</p> <ul style="list-style-type: none"> <li>thorough knowledge and understanding of supervised, semi-supervised, and unsupervised learning.</li> <li>a confident grasp of how the style of learning impacts the performance</li> </ul> </td> </tr> <tr> <td>2</td> <td> <p><b>3-4 marks</b></p> <p>A good description, which shows:</p> <ul style="list-style-type: none"> <li>generally secure knowledge and understanding of supervised, and/or semi-supervised, and/or unsupervised learning.</li> <li>a generally secure understanding of how the style of learning impacts the performance.</li> </ul> </td> </tr> <tr> <td>1</td> <td> <p><b>1-2 marks</b></p> <p>A basic description, which shows:</p> <ul style="list-style-type: none"> <li>some knowledge and understanding of supervised, and/or semi-supervised, and/or unsupervised learning.</li> <li>• some grasp of how the style of learning impacts the performance.</li> </ul> </td> </tr> <tr> <td></td> <td> <p><b>0 marks</b></p> <p>Response not creditworthy or not attempted.</p> </td> </tr> </tbody> </table>	Band	AO1	3	<p><b>5-6 marks</b></p> <p>A very good description, which shows:</p> <ul style="list-style-type: none"> <li>thorough knowledge and understanding of supervised, semi-supervised, and unsupervised learning.</li> <li>a confident grasp of how the style of learning impacts the performance</li> </ul>	2	<p><b>3-4 marks</b></p> <p>A good description, which shows:</p> <ul style="list-style-type: none"> <li>generally secure knowledge and understanding of supervised, and/or semi-supervised, and/or unsupervised learning.</li> <li>a generally secure understanding of how the style of learning impacts the performance.</li> </ul>	1	<p><b>1-2 marks</b></p> <p>A basic description, which shows:</p> <ul style="list-style-type: none"> <li>some knowledge and understanding of supervised, and/or semi-supervised, and/or unsupervised learning.</li> <li>• some grasp of how the style of learning impacts the performance.</li> </ul>		<p><b>0 marks</b></p> <p>Response not creditworthy or not attempted.</p>	6		6
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4	(a)	<p>Frankie owns a company and has been told that maintenance of the digital systems is required.</p> <p>Discuss why it is important to maintain digital technologies after they have been released.</p> <p>Award <b>one</b> mark for a limited response, for example: Regular maintenance is necessary after the release of digital technologies because it helps to prevent problems and ensures that they continue to function properly.</p> <p>Award <b>two</b> marks for a basic response, for example: Regular maintenance is necessary after the release of digital technologies because it helps to prevent problems, boosts performance, and ensures that they continue to function properly.</p> <p>Award <b>three</b> marks for a more developed response, for example:  Regular maintenance is necessary after the release of digital technologies because it helps to prevent problems, boosts performance, and ensures that they continue to function properly. This can aid in preventing costly repairs or replacements in the future and enhance the user experience.</p>		3	3
	(b)	<p>Explain the difference between different types of software maintenance.</p> <p><b>Indicative content</b></p> <ul style="list-style-type: none"> <li>• <b>Corrective maintenance:</b> This means fixing problems that have already happened, such as fixing bugs or figuring out why software isn't working correctly.</li> <li>• <b>Adaptive maintenance</b> involves making changes to the software to meet new requirements or user needs, like adding new features or functions.</li> <li>• <b>Perfective maintenance:</b> This is when you make changes to the software to make it work better or make the user experience better. For example, you might optimise algorithms or redesign the user interface to do this.</li> <li>• <b>Preventative maintenance:</b> This is applying fixes that prevent further issues from occurring e.g. closing security loopholes.</li> </ul>		6	6

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5	<p>Describe the possible concerns caused by the growth of AI and outline ways, including regulation, to protect against unintended consequences.</p> <p><b>Indicative content</b></p> <p><u>Possible concerns</u></p> <p>Displacement of jobs: As AI gets better, it may be able to do the work of humans in some industries, which raises concerns about job security and income stability.</p> <p>Privacy: AI systems often work by collecting and analysing data, which may make people worry about their privacy.</p> <p>Bias: AI systems can be biased if they are trained on biased data, which can lead to unfair treatment of some groups and discrimination.</p> <p>Autonomy: As AI systems become more independent, there may be concerns about their ability to make decisions on their own and the possible results of those decisions.</p> <p>Security: AI systems can be attacked by hackers, which could put national security and critical infrastructure at risk.</p> <p><u>Protection</u></p> <p>Regulation: Governments can make rules about how AI is made and used, such as setting ethical guidelines and standards for how data is collected and used.</p>	8		8										

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	<p>Transparency: AI systems should be clear about how they work, so that stakeholders can see how decisions are made and how data is used.</p> <p>Diversity and inclusion: AI systems should be built and trained by teams with a wide range of backgrounds to avoid bias and make sure they are representative of the people they serve.</p> <p>Education and awareness: It's important for people and organisations to learn about the possible effects and limits of AI, as well as the risks and benefits of using it.</p> <p>Accountability: The people who make and use AI should be held responsible for any bad things that happen because of it.</p> <table border="1"> <thead> <tr> <th>Band</th> <th>AO1</th> </tr> </thead> <tbody> <tr> <td>4</td> <td> <p align="center"><b>7-8 marks</b></p> <p>An excellent description which shows:</p> <ul style="list-style-type: none"> <li>thorough knowledge of the possible concerns caused by AI</li> <li>a confident description of the ways to protect against the unintended consequences of using AI</li> </ul> </td> </tr> <tr> <td>3</td> <td> <p align="center"><b>5-6 marks</b></p> <p>A very good description, which shows:</p> <ul style="list-style-type: none"> <li>thorough knowledge of the possible concerns caused by AI</li> <li>a confident description of the ways to protect against the unintended consequences of using AI</li> </ul> </td> </tr> <tr> <td>2</td> <td> <p align="center"><b>3-4 marks</b></p> <p>A good description, which shows:</p> <ul style="list-style-type: none"> <li>generally secure knowledge of the possible concerns caused by AI</li> <li>a generally secure understanding of the ways to protect against the unintended consequences of using AI</li> </ul> </td> </tr> <tr> <td>1</td> <td> <p align="center"><b>1-2 marks</b></p> <p>A basic description, which shows:</p> <ul style="list-style-type: none"> <li>some knowledge of the possible concerns caused by AI</li> <li>some grasp of the ways to protect against the unintended consequences of using AI</li> </ul> </td> </tr> <tr> <td></td> <td> <p align="center"><b>0 marks</b></p> <p>Response not creditworthy or not attempted.</p> </td> </tr> </tbody> </table>	Band	AO1	4	<p align="center"><b>7-8 marks</b></p> <p>An excellent description which shows:</p> <ul style="list-style-type: none"> <li>thorough knowledge of the possible concerns caused by AI</li> <li>a confident description of the ways to protect against the unintended consequences of using AI</li> </ul>	3	<p align="center"><b>5-6 marks</b></p> <p>A very good description, which shows:</p> <ul style="list-style-type: none"> <li>thorough knowledge of the possible concerns caused by AI</li> <li>a confident description of the ways to protect against the unintended consequences of using AI</li> </ul>	2	<p align="center"><b>3-4 marks</b></p> <p>A good description, which shows:</p> <ul style="list-style-type: none"> <li>generally secure knowledge of the possible concerns caused by AI</li> <li>a generally secure understanding of the ways to protect against the unintended consequences of using AI</li> </ul>	1	<p align="center"><b>1-2 marks</b></p> <p>A basic description, which shows:</p> <ul style="list-style-type: none"> <li>some knowledge of the possible concerns caused by AI</li> <li>some grasp of the ways to protect against the unintended consequences of using AI</li> </ul>		<p align="center"><b>0 marks</b></p> <p>Response not creditworthy or not attempted.</p>			
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6	Cari's company is looking to update its booking system and is considering different development methodologies.			
	<p>(a) Explain Waterfall and Big Bang methodologies, and how their advantages and disadvantages make them suitable for the company. [6]</p> <p><b>Indicative content</b></p> <p><b>Waterfall:</b></p> <p>This is a development method in which each step of a project is finished before moving on to the next one.</p> <p><u>Advantage:</u> It is simple to understand and suitable for large projects where the requirements are easily understood. Clear documentation and a focus on careful planning.</p> <p><u>Disadvantage:</u> It can be rigid and may not let changes be made after a certain phase has been finished / It is very bad at reacting to changing requirements and is not suitable for projects where the requirements may not be fully understood at the start.</p> <p><b>Big Bang:</b></p> <p>The Big Bang Model comprises focusing all the possible resources in software development and coding, with very little or no planning.</p> <p><u>Advantage:</u> With this method, all the steps of a project are done at once. It works best for small projects with clear requirements / this model is ideal for repetitive or small projects with minimum risks.</p> <p><u>Disadvantage:</u> It requires a lot of coordination and resource allocation, it might not work for bigger or more complicated projects. It is a very high-risk model and can turn out to be very expensive if requirements are misunderstood.</p>		6	6

Question		Answer		AO1	AO2	Total Mark
		<b>Band</b>	<b>AO2</b>			
		<b>3</b>	<p><b>5-6 marks</b></p> <p>A very good explanation, which shows:</p> <ul style="list-style-type: none"> <li>thorough knowledge and understanding of the Waterfall and Big Bang development methodologies</li> <li>a confident grasp of the advantages and disadvantages for the company</li> </ul>			
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(b)	<p>Cari understands that testing is very important to ensure the new booking system is working correctly. Explain Alpha and Beta testing.</p> <p><b><u>Indicative content</u></b></p> <p>Alpha testing and beta testing are two types of software testing that are usually done before a software application or product is released.</p> <p>Alpha testing is usually the first step in the testing process. It is usually done by the development team, and its goal is to find any major problems or bugs that need to be fixed before the software is made available. Most of the time, alpha testing is done in a controlled environment with a small group of testers or just one person.</p> <p>Beta testing is the second step in the testing process. It is usually done by an outside group of testers who are like the people who will use the software. Beta testing is usually done in the real world and is meant to find problems or bugs that might not have been found in alpha testing. Most of the time, beta testing is the last step before a piece of software is made available to the client.</p> <p>Both alpha testing and beta testing are important parts of making software. They help make sure that the programme is as reliable and easy to use as possible before it is released.</p> <table border="1"> <thead> <tr> <th>Band</th> <th>AO2</th> </tr> </thead> <tbody> <tr> <td>3</td> <td> <p><b>5 marks</b></p> <p>A very good explanation, which shows:</p> <ul style="list-style-type: none"> <li>thorough knowledge and understanding of Alpha and Beta testing.</li> <li>a confident grasp of when Alpha and Beta testing will occur.</li> </ul> </td> </tr> <tr> <td>2</td> <td> <p><b>2-4 marks</b></p> <p>A good explanation, which shows:</p> <ul style="list-style-type: none"> <li>generally secure knowledge and understanding of Alpha and/or Beta testing.</li> <li>a generally secure explanation of when Alpha and/or Beta testing will occur.</li> </ul> </td> </tr> <tr> <td>1</td> <td> <p><b>1 mark</b></p> <p>A basic explanation, which shows:</p> <ul style="list-style-type: none"> <li>some knowledge and understanding of Alpha and/or Beta testing.</li> <li>some grasp of when Alpha and /or Beta testing will occur.</li> </ul> </td> </tr> <tr> <td></td> <td> <p><b>0 marks</b></p> <p>Response not creditworthy or not attempted.</p> </td> </tr> </tbody> </table>	Band	AO2	3	<p><b>5 marks</b></p> <p>A very good explanation, which shows:</p> <ul style="list-style-type: none"> <li>thorough knowledge and understanding of Alpha and Beta testing.</li> <li>a confident grasp of when Alpha and Beta testing will occur.</li> </ul>	2	<p><b>2-4 marks</b></p> <p>A good explanation, which shows:</p> <ul style="list-style-type: none"> <li>generally secure knowledge and understanding of Alpha and/or Beta testing.</li> <li>a generally secure explanation of when Alpha and/or Beta testing will occur.</li> </ul>	1	<p><b>1 mark</b></p> <p>A basic explanation, which shows:</p> <ul style="list-style-type: none"> <li>some knowledge and understanding of Alpha and/or Beta testing.</li> <li>some grasp of when Alpha and /or Beta testing will occur.</li> </ul>		<p><b>0 marks</b></p> <p>Response not creditworthy or not attempted.</p>		5	5
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7	<p>Describe User-Centred Design (UCD) in terms of the following:</p> <ul style="list-style-type: none"> <li>• visibility</li> <li>• accessibility</li> <li>• legibility</li> <li>• language.</li> </ul> <p><b>Visibility</b> refers to how easy it is to see and find important information and features in a product, service, or experience. This means making sure that important information is not hidden or buried and that the product or service is easy to use and understand.</p> <p><b>Accessibility</b> is the degree to which a product, service, or experience can be used by people with a wide range of abilities, including those with disabilities. This means making sure that products and services are easy for people with visual, auditory, motor, or cognitive disabilities to use and that they meet accessibility standards.</p> <p><b>Legibility</b> means that the text and other information in the product, service, or experience are easy to read and understand. This means using clear, concise language, the right font sizes and styles, and a layout and design that makes the information easy to read and understand.</p> <p><b>Language:</b> Short sentences are preferred here. The easier the phrase and the words, the better</p>	8		8												
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8	<p>Describe the legal, ethical, and professional implications of the different uses of social media by individuals and organisations.</p> <p><b>Indicative content</b></p> <p>Legal implications: Online privacy, freedom of speech, defamation, data protection, copyright infringement, trademark issues, employment law/employee conduct.</p> <p><b>Ethical:</b> Values, honesty, authenticity, misinformation, influences disclosing if they're being sponsored, cyberbullying, harassment, respecting others, and using personal information in the right way.</p> <p><b>Professional implications:</b> Reputation, credibility, damage to an organisation's or a person's professional reputation, loss of job, as well as the possibility of good outcomes, like more visibility and the ability to build and keep professional relationships, networking and getting jobs.</p> <table border="1"> <thead> <tr> <th>Band</th> <th>AO1</th> </tr> </thead> <tbody> <tr> <td><b>3</b></td> <td> <p><b>6-7 marks</b></p> <p>A very good description, which shows:</p> <ul style="list-style-type: none"> <li>thorough knowledge of the legal, ethical, and professional implications of using social media</li> <li>a confident discussion of the above for different uses for individuals and organisations</li> </ul> </td> </tr> <tr> <td><b>2</b></td> <td> <p><b>3-5 marks</b></p> <p>A good description, which shows:</p> <ul style="list-style-type: none"> <li>generally secure knowledge of the legal, ethical, and professional implications of using social media</li> <li>a generally secure understanding of the above for different uses for individuals and organisations</li> </ul> </td> </tr> <tr> <td><b>1</b></td> <td> <p><b>1-2 marks</b></p> <p>A basic description, which shows:</p> <ul style="list-style-type: none"> <li>some knowledge of the legal, ethical, and professional implications of using social media</li> <li>some grasp of the above for different uses for individuals and organisations</li> </ul> </td> </tr> <tr> <td></td> <td> <p><b>0 marks</b></p> <p>Response not creditworthy or not attempted.</p> </td> </tr> </tbody> </table>	Band	AO1	<b>3</b>	<p><b>6-7 marks</b></p> <p>A very good description, which shows:</p> <ul style="list-style-type: none"> <li>thorough knowledge of the legal, ethical, and professional implications of using social media</li> <li>a confident discussion of the above for different uses for individuals and organisations</li> </ul>	<b>2</b>	<p><b>3-5 marks</b></p> <p>A good description, which shows:</p> <ul style="list-style-type: none"> <li>generally secure knowledge of the legal, ethical, and professional implications of using social media</li> <li>a generally secure understanding of the above for different uses for individuals and organisations</li> </ul>	<b>1</b>	<p><b>1-2 marks</b></p> <p>A basic description, which shows:</p> <ul style="list-style-type: none"> <li>some knowledge of the legal, ethical, and professional implications of using social media</li> <li>some grasp of the above for different uses for individuals and organisations</li> </ul>		<p><b>0 marks</b></p> <p>Response not creditworthy or not attempted.</p>	7		7
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9	<p>Name and describe the four stages within the S-curve model of the digital development life cycle. Describe the economic benefits and the classification of users that take up new technologies.</p> <p><b>Indicative content</b></p> <p><b>Research and Development (R&amp;D):</b></p> <ul style="list-style-type: none"> <li>• <b>Description:</b> This initial stage focuses on creating and improving the technology. Efforts are directed towards research, experimentation, and development to solve existing problems and enhance functionality.</li> <li>• <b>Economic Benefits:</b> At this stage, the economic benefits are minimal or negative since investments are high, and returns are not yet realised.</li> <li>• <b>Classification of Users:</b> Innovators and early adopters are the primary users, eager to experiment with and provide feedback on the new technology.</li> </ul> <p><b>Ascent:</b></p> <ul style="list-style-type: none"> <li>• <b>Description:</b> The technology begins to gain traction. Performance improvements become evident, and the technology starts to be adopted in various market segments.</li> <li>• <b>Economic Benefits:</b> Economic returns start to increase significantly as the technology becomes more popular and sales grow.</li> <li>• <b>Classification of Users:</b> Early adopters and early majority users dominate this stage, driving growth and providing further refinements through their feedback.</li> </ul> <p><b>Maturity:</b></p> <ul style="list-style-type: none"> <li>• <b>Description:</b> The technology reaches its peak in terms of performance and market penetration. It is widely accepted and used, leading to steady, high returns.</li> <li>• <b>Economic Benefits:</b> The economic benefits are at their maximum during this stage as the technology has been fully adopted by the majority of users.</li> <li>• <b>Classification of Users:</b> The late majority begins to adopt the technology, contributing to its widespread usage.</li> </ul> <p><b>Decline:</b></p> <ul style="list-style-type: none"> <li>• <b>Description:</b> The technology starts to lose its competitive edge due to the emergence of newer technologies. Sales and market interest begin to wane.</li> <li>• <b>Economic Benefits:</b> Economic returns decline as the technology becomes outdated and is gradually replaced by newer innovations.</li> <li>• <b>Classification of Users:</b> Laggards are the primary users in this stage, as they are resistant to change and continue using the technology until it becomes obsolete.</li> </ul>	10		10

Question	Answer	AO1	AO2	Total Mark												
	<table border="1"> <thead> <tr> <th>Band</th> <th>AO1</th> </tr> </thead> <tbody> <tr> <td>4</td> <td> <p style="text-align: center;"><b>9-10 marks</b></p> <p>An excellent description which shows:</p> <ul style="list-style-type: none"> <li>• thorough knowledge of the four stages of the S-curve model</li> <li>• a confident description of each stage including the economic benefits and the users</li> </ul> </td> </tr> <tr> <td>3</td> <td> <p style="text-align: center;"><b>6-8 marks</b></p> <p>A very good discussion, which shows:</p> <ul style="list-style-type: none"> <li>• thorough knowledge of the stages of the S-curve model</li> <li>• a confident description of the stages including the economic benefits and the users</li> </ul> </td> </tr> <tr> <td>2</td> <td> <p style="text-align: center;"><b>3-5 marks</b></p> <p>A good description, which shows:</p> <ul style="list-style-type: none"> <li>• generally secure knowledge of the stages of the S-curve model</li> <li>• a general understanding of most stages including the economic benefits and the users</li> </ul> </td> </tr> <tr> <td>1</td> <td> <p style="text-align: center;"><b>1-2 marks</b></p> <p>A basic description, which shows:</p> <ul style="list-style-type: none"> <li>• some knowledge of some of the four stages of the S-curve model</li> <li>• some grasp of some of the stages including the economic benefits and the users</li> </ul> </td> </tr> <tr> <td></td> <td> <p style="text-align: center;"><b>0 marks</b></p> <p>Response not creditworthy or not attempted.</p> </td> </tr> </tbody> </table>	Band	AO1	4	<p style="text-align: center;"><b>9-10 marks</b></p> <p>An excellent description which shows:</p> <ul style="list-style-type: none"> <li>• thorough knowledge of the four stages of the S-curve model</li> <li>• a confident description of each stage including the economic benefits and the users</li> </ul>	3	<p style="text-align: center;"><b>6-8 marks</b></p> <p>A very good discussion, which shows:</p> <ul style="list-style-type: none"> <li>• thorough knowledge of the stages of the S-curve model</li> <li>• a confident description of the stages including the economic benefits and the users</li> </ul>	2	<p style="text-align: center;"><b>3-5 marks</b></p> <p>A good description, which shows:</p> <ul style="list-style-type: none"> <li>• generally secure knowledge of the stages of the S-curve model</li> <li>• a general understanding of most stages including the economic benefits and the users</li> </ul>	1	<p style="text-align: center;"><b>1-2 marks</b></p> <p>A basic description, which shows:</p> <ul style="list-style-type: none"> <li>• some knowledge of some of the four stages of the S-curve model</li> <li>• some grasp of some of the stages including the economic benefits and the users</li> </ul>		<p style="text-align: center;"><b>0 marks</b></p> <p>Response not creditworthy or not attempted.</p>			
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Question			Specification content (main focus)					Mark allocation			
			Section					Part	Total Marks	AO1	AO2
			2.1.1	2.1.2	2.1.3	2.1.4	2.1.5				
1	(a)				6		a	6		6	
	(b)				6		a	6		6	
2			6				d	6	6		
3	(a)			3			b	3	3		
	(b)			6			b	6	6		
4	(a)				3		e	3		3	
	(b)				6		e	6		6	
5				8			e	8	8		
6	(a)				6		c	6		6	
	(b)				5		b	5		5	
7						8	b	8	8		
8						7	c	7	7		
9					10		a	10	10		

<b>Total Marks</b>	<b>6</b>	<b>17</b>	<b>30</b>	<b>20</b>	<b>7</b>		<b>80</b>	<b>48</b>	<b>32</b>
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