FIRST SEMESTER

ICT

(تقنية المعلومات والاتصالات)

(Answers)

SULTANATE OF OMAN
MINISTRY OF EDUCATION

Marking Guide of General Educational Diploma for Private Schools

2023/2024

Semester One – First Session

Subject: ICT

مركز القياس والتقويم التربوي
The Center for Educational Assessment and Measurement (CEAM)

Note: There are 17 pages in this guide

First: Answers for the Multiple-Choice Items (8 Marks):

N.	Answer	Mark	Learning Outcome	Learning Level
1	C Limited real-world value outside of the context it was created for.	1	Differentiate between virtual currency and other types of digital currencies	AO1
2	D To cleanse, format, and structure the data for analysis.	1	Identify and describe the stages of data mining	AO1
3	D Engage in discussions and exchange information on specific topics.	1	Define forums	AO1
4	A Remove offensive comments and privately warn the users involved.	1	Explain the role of moderators in forums	AO2

5	C Video conferencing.	1	Describe how video conferencing is used for teaching and learning	AO1
6	C Generate content or text on a web page.	1	Explain the purpose and functionality of document.write in java script	AO1
7	A document.getElementById	1	Explain the purpose of using document.getElementById in JavaScript	AO1
8	B A notification message to the user.	1	Analyze the differences between alert, confirm, and prompt in terms of their functionality and output.	AO1

Second: Answers for the Extended Response Items (32 Marks):

General Notes

- There may be different ways of answering questions, but a basic requirement for all answers is that they are RELEVANT.
- If the answer is clearly not relevant, and the student has clearly made no attempt to answer the question that was set, NO marks should be awarded. However, if the student has genuinely attempted the answer, but his answer is only partly relevant, then a reduced mark (not zero) should be awarded.

<table>
<tr><th>N.</th><th>Correct Answer</th><th>Mark</th></tr>
<tr><td>9</td><td>
<u>A sample answer:</u>
<u>Any TWO of the following:</u>
1. Bitcoin
2. Litecoin
3. Ethereum
4. BNB
5. Tron
6. Dogecoin
<u>Marking guidance:</u>
Each popular form worth 0.5 mark (0.5*2=1 mark)
The answer above is just a sample answer; any other correct answers should be awarded.
<table>
<tr><td>Learning Outcome</td><td>Identify examples of cryptocurrency</td></tr>
<tr><td>Learning Level</td><td>AO1</td></tr>
<tr><td>Pages</td><td>267</td></tr>
</table>
</td><td>1</td></tr>
<tr><td>10</td><td>
<u>A sample answer:</u>
It is the process of <u>collecting large sets of data</u> and <u>analyzing them</u> to <u>identify patterns and trends</u>.
<u>Marking guidance and rubric:</u>
The answer above is just a sample answer; any other correct answers should be marked based on the following rubric:
<table>
<tr><th>Mark</th><th>Remembering and Understanding (AO1) – 1 mark</th></tr>
<tr><td>1</td><td>Accurate definition provided.</td></tr>
<tr><td>0.5</td><td>Partial or somewhat accurate definition.</td></tr>
<tr><td>0</td><td>No response or incorrect definition</td></tr>
</table>
<table>
<tr><td>Learning Outcome</td><td>Define data mining</td></tr>
<tr><td>Learning Level</td><td>AO1</td></tr>
<tr><td>Pages</td><td>269</td></tr>
</table>
</td><td>1</td></tr>
</table>

11	**A sample answer:** *Any **three** of the followings:* 1. Business understanding: There are three main elements to the business understanding stage: setting the objectives, developing the project plan and establishing the criteria for success. 2. Data Understanding: The data understanding stage involves an initial collection of data. This is normally collected from various sources that are available. Once the data is collected, the integrity, accuracy and the properties of the data are considered, to make sure that it is viable. 3. Data preparation: This is the largest stage in the project and the most time consuming. During this stage the data is taken through a whole process of selection, cleansing, construction and formatting, to make sure that it is in the form required for the business. This can then allow for patterns and trends to be established in the data, relating to the business needs. 4. Data modelling: During this stage, various test scenarios are generated to model the data. This will allow the business to understand whether the models are suitable for the business needs, and that the models fall in line with the business initiatives. 5. Evaluation: In the evaluation stage, the results generated by the models are evaluated. The outcome of this evaluation may produce new business needs, depending on the patterns and trends that have been identified in the process. 6. Deployment: The deployment stage normally involves creating a report and other visual material to present the findings of the data mining process to the stakeholders of a business. This information can then be used by the stakeholders to decide what actions the business will take next. **Marking guidance:** *The correct relevant brief description of each stage should be awarded 1 mark (1 mark, 1*3 =3 marks)* ***Note: No need to identify the name of the stage explicitly.*** **Learning Outcome**: Identify and describe the stages of data mining **Learning Level**: AO2 **Pages**: 269-270	3

12. A

A sample answer:

Networked learning is a form of online collaborative learning that helps learners to connect with other learners as well as their tutor.

Marking guidance and rubric:

*The answer above is just a sample answer; any other correct answers **should be marked** based on the following rubric:*

Mark	Remembering and Understanding (AO1) – 2 marks
2	Accurate definition provided.
1	Partial or somewhat accurate definition.
0	No response or incorrect definition

Learning Outcome	Define networked learning
Learning Level	AO1
Pages	278

2

12. B

A sample answer:

Massive open online courses are courses that are not limited in the number of people that can access them, free of cost and have open access using the web.

Marking guidance and rubric:

*The answer above is just a sample answer; any other correct answers **should be marked** based on the following rubric:*

Mark	Remembering and Understanding (AO1) – 2 marks
2	Accurate definition provided.
1	Partial or somewhat accurate definition.
0	No response or incorrect definition

Learning Outcome	Define MOOCs
Learning Level	AO1
Pages	278

2

13

A sample answer:

One major challenge that students faced when the Ministry of Education (MOE) implemented video conferencing platforms as the primary means for delivering learning during the COVID-19 pandemic was the issue of "Broadband Speed." With the sudden transition to online learning, the quality and reliability of internet connections became a critical factor for students. Students in areas with insufficient broadband infrastructure or slow internet speeds encountered significant hurdles in attending virtual classes.

Marking guidance and rubric:

*The answer above is just a sample answer; any other correct answers **should be marked** based on the following rubric:*

Mark	Application (AO2) – 2 marks
2	The response provides a clear and well-structured description of one major challenge, faced by students during the implementation of video conferencing for learning. It offers a good brief explanation of the issue.
1	The response partially addresses the question by describing one challenge but may lack clarity or detail.
0	The response does not address the question or provides irrelevant or incorrect information. It lacks a proper description of the challenge or any relevant content related to the question

Learning Outcome	Summarize the benefits and challenges of video conferencing in education.
Learning Level	AO2
Pages	279

2

<table>
<tr>
<td>14</td>
<td>
<u>Answer:</u>

<u>Any ONE of the following:</u>

• VAR (Video Assistant Referee)
• Drones
• Hawk-Eye system
• Communication microphones.

<u>Marking guidance:</u>
Any other correct answer should be awarded.
<table>
<tr><td>Learning Outcome</td><td>Write examples of how IT is used in sports</td></tr>
<tr><td>Learning Level</td><td>AO1</td></tr>
<tr><td>Pages</td><td>280</td></tr>
</table>
</td>
<td>1</td>
</tr>
<tr>
<td>15.
A</td>
<td>
A sample answer:
A sample answer:
<u>Risk 1: Value (Price) Fluctuation:</u>
One of the most prominent risks associated with cryptocurrencies is their significant price volatility. The value of cryptocurrencies can fluctuate dramatically in a short period. This risk can have substantial financial consequences.
Consequences of risk 1:
Financial Losses: If an individual invests in a cryptocurrency at a high price and its value plummets, they may experience substantial financial losses.
Missed Opportunities: Conversely, if an individual refrains from investing in a cryptocurrency due to concerns about volatility, they might miss out on potential gains when the cryptocurrency's value surges.
<u>Risk 2: Challenges to traditional banks:</u>
The decentralized nature of cryptocurrencies challenges the traditional banking system. Cryptocurrencies operate outside the control of central banks and financial institutions, and this can be perceived as a threat to the established financial order.
Consequences of risk 2:
Regulatory Scrutiny and Restrictions: Banks and regulatory bodies may view cryptocurrencies as a threat to their control over monetary systems and financial transactions. Consequently, there is a risk of increased regulatory scrutiny and the imposition of restrictive measures, such as limiting the ability of banks to facilitate cryptocurrency transactions. This could result in a reduced level of integration between traditional banking services and cryptocurrency markets.
</td>
<td>3</td>
</tr>
</table>

Loss of Centralized Control: Cryptocurrencies operate on decentralized blockchain technology, which removes the need for intermediaries like banks. If cryptocurrencies gain widespread acceptance, banks may face the risk of losing control over certain aspects of financial transactions. This could impact their ability to regulate and monitor financial activities, potentially leading to concerns related to money laundering, fraud, and tax evasion.

Marking guidance and rubric:

The provided answer is just a sample answer; any other answer should be awarded based on the following rubric:

Mark	Remembering and Understanding (AO1) – 1 mark	Mark	Analysis (AO3) – 2 marks
1	The response provides correct, accurate and relevant identification of TWO associated risks.	2	The response provides a good analysis of both the identified risks associated with using cryptocurrencies. It not only identifies the risks but also offers TWO briefly-explained potential consequences for each risk. The analysis demonstrates a deep understanding of the topic, and the consequences are presented with specificity and clarity.
0.5	The response provides correct, accurate and relevant identification of ONE associated risk.	1-1.5	The response partially addresses the question by discussing both identified risks but may lack specific examples or provide unclear consequences for each risk. While it provides a good analysis, it lacks the depth and clarity of a full mark response
0	The response does not provide a correct identification of any potential risk.	0.5	The response partially addresses the question by discussing only one risk in detail. It does not provide an analysis of potential consequences.
		0	The response does not address the question or provides irrelevant or incorrect information. It lacks an analysis of the identified risks and their potential consequences. There is a lack of understanding or any relevant content related to the question.

	Learning Outcome | Assess the potential risk of using cryptocurrencies **Learning Level** | AO1, AO3 **Pages** | 267 - 268	
15. B	**A sample answer:** The likelihood of value fluctuations in the cryptocurrency market is considered high due to several factors. Cryptocurrencies are relatively new and are influenced by various factors, including market sentiment, regulatory developments, technological advancements, and macroeconomic trends. Additionally, the lack of intrinsic value, coupled with the speculative nature of the market, contributes to higher volatility. Traders and investors should be aware that value fluctuations are inherent to the cryptocurrency ecosystem. The likelihood of cryptocurrencies being perceived as troubling to banks is medium to high. The decentralized and disruptive nature of cryptocurrencies challenges the traditional financial system. As cryptocurrencies gain popularity and acceptance, banks and regulatory bodies are likely to respond with increased scrutiny and regulatory measures to protect their interests. The extent of this response may vary across jurisdictions, leading to a medium to high likelihood of cryptocurrencies causing concerns for the traditional banking sector. In summary, the identified risks are likely to occur with some regularity in the world of cryptocurrencies. This underlines the importance of proactive risk management and security measures for individuals involved in this market. **Marking guidance and rubric:** *The provided answer is just a sample answer; any other answer **should be marked** based on the following rubric:*	2

Mark	Evaluation (AO4) – 2 marks
2	The response provides a well-balanced evaluation of the likelihood of both identified risks occurring. It accurately assesses the likelihood of these risks and presents the information in a clear and coherent manner, demonstrating a deep understanding of the topic.
0.5 – 1.5	The response partially addresses the question by evaluating either one risk or both risks with limited clarity. While it provides some relevant information, it lacks the good evaluation and specificity of a full mark response

	0	The response does not address the question or provides irrelevant or incorrect information. It lacks an evaluation of the likelihood of the identified risks occurring. There is a lack of understanding or any relevant content related to the question.

Learning Outcome	Assess the potential risk of using cryptocurrencies
Learning Level	AO4
Pages	267

16. A

A sample answer:

Positive Impact:

One positive impact of social networking on individuals is the ability to connect with friends and family regardless of geographical boundaries. Social platforms enable people to stay in touch with loved ones, share experiences, and celebrate life events together, even when they are miles apart. This fosters a sense of togetherness and helps maintain strong relationships, reducing feelings of isolation.

Negative Impact:

However, a negative impact of social networking is the potential for addiction and excessive screen time. Individuals may find themselves spending excessive hours scrolling through social media feeds, which can lead to reduced productivity, lack of focus, and an adverse impact on mental health. It's essential for individuals to strike a balance between online and offline life to avoid these negative consequences.

3

Marking guidance and rubric:

The provided answer is just a sample answer; any other answer should be marked based on the following rubric:

Mark	Remembering and Understanding (AO1) – 1 mark	Mark	Analysis (AO3) – 2 marks
1	The response provides correct, accurate and relevant identification of both, a positive and a negative impact of social networking	2	The response directly and clearly analyzes both a positive and a negative impact of social networking on individuals in a well-structured manner. It provides a good analysis of both the positive and negative impacts, addressing their

			significance and potential consequence effectively.
0.5	The response provides correct, accurate and relevant identification of either a positive or a negative impact of social networking.	1 – 1.5	The response partially addresses the question by identifying both a positive or a negative impact. It presents somewhat relevant information but does not provide a detailed or well-explained analysis of both the positive and negative impacts.
0	The response does not provide any correct identification of the positive and negative impacts of social networking.	0.5	The response partially addresses the question by identifying either a positive or a negative impact but does not include both. It presents some relevant information but does not provide a detailed or well-explained analysis of the positive or negative impact.
		0	The response does not address the question or provides irrelevant or incorrect information. It lacks an analysis of both a positive and a negative impact of social networking on individuals. There is a lack of understanding or any relevant content related to the question.

Learning Outcome	**Discuss positive and negative impacts of social networking on individuals.**
Learning Level	AO1, AO3
Pages	275-276

16. B

A sample answer:

It's evident that social networking offers valuable benefits in terms of connectivity and relationships. However, it's equally clear that privacy and mental health issues are genuine concerns that require attention.

To strike a balance, individuals should exercise mindfulness when using social media, and remain aware of the potential drawbacks. This awareness can help individuals enjoy the positive aspects of social networking while mitigating its negative influences.

2

Marking guidance and rubric:

The provided answer is just a sample answer; any other answer should be awarded based on the following rubric:

Mark	Evaluation (AO4) – 2 marks
2	The response offers a concise but balanced evaluation of the overall influence of social networking on individuals' lives, considering both the positive and negative influences previously analyzed. It presents a basic recommendation for addressing the potential drawbacks.
0.5-1.5	The response partially addresses the question by discussing either the positive or negative influences but lacks a comprehensive evaluation of both aspects. It may provide limited recommendations.
0	The response does not address the question or provides irrelevant or incorrect information. It lacks an evaluation of the overall influence of social networking on individuals' lives and lacks any relevant content.

Learning Outcome	Discuss positive and negative impacts of social networking on individuals.
Learning Level	AO4
Pages	275-276

17. A

Answer:

```
<script>
var mes = confirm (" Are you ready? ")
 var no1= prompt ("The result of 10+10 is: ")
document.getElementById("demo").innerHTML = no1;
</script>
```

Marking guidance:

The code contains three mistakes.
*Correcting only two mistakes is enough. Each mistake correction should be awarded 0.5 mark (2*1= 2 marks)*

2

Learning Outcome	Write the syntax for displaying prompt box.
Learning Level	AO2
Pages	472

17. B

Answer:
A confirm box will appear on the screen, displaying the question, "Are you ready?" This box offers two response options, "OK" and "Cancel" ***(0.5 mark).*** If the user selects "OK," a prompt box will subsequently pop up ***(0.5 mark),*** prompting the user to input the answer to the question, "What is the result of 10 + 10?" ***(0.5 mark).*** Upon clicking "OK" in the prompt box, the result will be displayed on the screen ***(0.5 marks).*** However, if the user clicks "Cancel," no further action will be taken, and the prompt boxes will be closed.

Marking guidance:
Please consider the mark distribution as illustrated in the sample answer.

Learning Outcome	Write the syntax for displaying prompt box. Explain the purpose of using popup boxes in JavaScript.
Learning Level	AO3
Pages	472

2

18. A

A sample Answer:

One way to utilize robotics in our manufacturing company to enhance productivity is by implementing robotic automation for the assembly of electronic components. We can deploy robotic arms equipped with advanced vision systems and precision tools to perform intricate assembly tasks with exceptional accuracy and speed.

Marking guidance and rubric:

A full mark response should not only identify a specific application of robotics but also provide a clear brief description of how it enhances productivity within the manufacturing company.

The provided answer is just a sample answer. All other correct answers ***should be marked*** *based on the following rubric:*

Mark	Application (AO2) – 2 marks
2	The response provides a well-explained example that demonstrates practicality and relevance within the given context.
1	The response contains some relevant content but does not fully demonstrate a practical or realistic application.
0	The response is irrelevant or completely incorrect. It does not address the question or provides a vague, unrelated, or entirely unrealistic scenario.

Learning Outcome	Demonstrate how robotics can be implemented in manufacturing to enhance productivity
Learning Level	AO2
Pages	280

2

18. B

A sample answer:

One potential benefit of utilizing robotics in our manufacturing company is the significant reduction in production time and increased efficiency. Robots can perform tasks with unmatched speed and consistency, leading to faster assembly and manufacturing processes. This benefit has a direct positive impact on the company's performance as it allows us to meet customer demands more efficiently and promptly.

On the other hand, a potential challenge associated with the use of robotics is the initial high implementation cost and the requirement for ongoing maintenance and upgrades. The purchase and integration of robotic systems can be a substantial investment for the company. Moreover, these systems require regular maintenance and software updates to ensure they operate optimally. The challenge of high costs and maintenance impacts the company's financial performance

Marking guidance and rubric:

A full mark response should identify and discuss one potential benefit of using robotics in the company (0.5) and one potential impact or consequence of this benefit on the company's performance (0.5). Moreover, it should identify and discuss one potential challenge of using robotics in the company (0.5) and one potential impact or consequence of this challenge on the company's performance (0.5).

*The provided answer is just a sample answer. All other correct answers **should be marked** based on the following rubric:*

Mark	Analysis (AO3) – 2 marks
2	The response identifies and explains one potential benefit of utilizing robotics by the mentioned company, as well as an impact or consequence of this benefit, and explains one potential challenge related to the use of robotics, along with an impact or consequence of this challenge, both with specificity and clarity.
1.5	The response partially addresses the question by correctly discussing one benefit aligned with its impact or consequence and one challenge without correctly addressing its impact or the opposite.
1	The response partially addresses the question by correctly discussing one benefit or one challenge only and one correct impact of either the benefit or the challenge.
0.5	The response partially addresses either a potential benefit or a challenge but does not include an impact or consequence for it.

2

	0	The response does not address the question or provides irrelevant or incorrect information. It lacks an analysis of a potential benefit, challenge, or their respective impacts or consequences.

Learning Outcome	Evaluate the potential advantages and disadvantages of using robotics in manufacturing
Learning Level	AO3
Pages	280

18. C

A sample Answer:

After analyzing the benefits and challenges of investing in robotics for our manufacturing company, it is evident that the investment can be effective. The potential benefit of increased efficiency and reduced production time aligns with our objectives. Although the challenge of high initial costs and maintenance exists, it can be managed effectively.

To maximize the advantages and address potential drawbacks, I recommend implementing a thorough workforce training program. This will equip employees with the skills needed to operate and maintain robotic systems. It will also help in creating a collaborative work environment where humans and robots can work together efficiently. This approach ensures that the investment in robotics is effective and that the workforce remains a valuable asset.

2

Marking guidance and rubric:

A full mark response should provide a balanced evaluative comment based on the analysis. It also provides one reasonable recommendation to either maximize the advantages or address the potential drawbacks of robotics technology in its manufacturing processes.

The provided answer is just a sample answer. All other correct answers should be marked based on the following rubric:

Mark	Evaluation (AO4) – 2 marks
2	The response directly, clearly, and briefly evaluates whether the investment in robotics is effective for the company, providing a good-structured evaluation. It offers a good brief recommendation on how the company can maximize the advantages or address the potential drawbacks of robotics technology in its manufacturing processes.
0.5 – 1.5	The response partially addresses the question by attempting to evaluate the effectiveness of the investment in robotics and or provides a recommendation. It presents some relevant information but does not provide a comprehensive evaluation or recommendation.
0	The response lacks an evaluation of whether the investment in robotics is effective or not and does not provide any recommendation.

Learning Outcome	Evaluate the potential advantages and disadvantages of using robotics in manufacturing
Learning Level	AO4
Pages	280

SULTANATE OF OMAN
MINISTRY OF EDUCATION

Marking Guide of General Educational Diploma for Private Schools

2023/2024

Semester One – Second Session

Subject: ICT

مركز القياس والتقويم التربوي
The Center for Educational Assessment and Measurement (CEAM)

Note: There are 19 pages in this guide

First: Answers for the Multiple-Choice Items (8 Marks):

N.	Answer	Mark	Learning Outcome	Assessment Objective
1	A Bitcoin.	1	Define cryptocurrency and identify examples such as Bitcoin and Litecoin.	AO1
2	C Data understanding.	1	Identify and describe the stages of data mining	AO1
3	D Asynchronous discussions, where users post and reply at their convenience.	1	Define forums	AO1
4	D Efficient long-distance document exchange.	1	Evaluate the advantages of using email to deliver information directly to customers compared to relying solely on other communication channels, such as social media.	AO2

5	C Computer-based training.	1	Identify and explain the various applications of computer-based training in organizations and businesses.	AO1
6	B Display text on the web page.	1	Explain the purpose and functionality of document.write in JavaScript.	AO1
7	A Document.getElementById ("first paragraph").	1	Write the syntax of the document.getElementById and apply it to target an HTML element by its ID.	AO1
8	D Allow the user to enter some text and give them two options, ok and cancel.	1	Explain the purpose of using pop-up boxes in JavaScript.	AO1

Second: Answers for the Extended Response Items (32 Marks):

General Notes

- There may be different ways of answering questions, but a basic requirement for all answers is that they are RELEVANT.
- If the answer is clearly not relevant, and the student has clearly made no attempt to answer the question that was set, NO marks should be awarded. However, if the student has genuinely attempted the answer, but his answer is only partly relevant, then a reduced mark (not zero) should be awarded.

N.	Correct Answer	Mark
9	**A sample answer:** One defined characteristic of digital currency is that: It is similar to traditional bank notes and coins, however, it is exchanged digitally using computers. *OR* The transactions of this currency are completed using encrypted methods. **Marking guidance and rubric:** *The answers above are just sample answers; any other correct answers* ***should be marked*** *based on the following rubric:* Mark | Remembering and Understanding (AO1) – 1 Mark 1 | The response provides a clear and accurate characteristic of digital currency. 0.5 | The response provides a partially accurate or somewhat clear characteristic of digital currency. 0 | The response is incorrect or does not provide any relevant characteristic of digital currency. Learning Outcome | Define digital currency and its characteristics Learning Level | AO1 Pages | *265-266*	1

A sample answer:

The term refers to the process of identifying and correcting errors, inconsistencies, and inaccuracies in the dataset. This includes tasks such as removing duplicate records, handling missing values, and ensuring that the data is in a format suitable for analysis.

Marking guidance and rubric:

The answer above is just a sample answer; any other correct answers ***should be marked*** *based on the following rubric:*

Mark	Remembering and Understanding (AO1) – 1 Mark
1	The response provides a clear and accurate description of the meaning of "data cleansing" in the context of the data preparation stage of the data mining process.
0.5	The response provides a partially accurate or somewhat clear description of "data cleansing," but there may be some inaccuracies or lack of clarity.
0	The response is incorrect or does not provide any relevant description of "data cleansing."

10

Learning Outcome	Define key terms and concepts related to data mining: data cleansing
Learning Level	AO1
Pages	269

1

A sample answer:

1. **Predicting Customer Spending Habits:** Data mining can be used to predict customer spending habits. By analyzing past ordering behavior, such as the types of food, order frequency, and order size, a food delivery company can build predictive models that anticipate the spending habits of individual customers.
2. **Predicting Product Trends:** Data mining can assist a food delivery company in predicting product trends. By analyzing customer order data, including popular dishes, emerging food trends, and seasonal preferences, the company can identify patterns and forecast which cuisines and dishes are likely to be in high demand in the near future.
3. **Tailoring Products and Advertising to Individuals:** Data mining allows food delivery companies to personalize their offerings and advertising for individual customers. By analyzing customer data, such as order history, reviews, and demographic information, the company can create tailored menus and promotions.

Marking guidance and rubric:

The answer above is just a sample answer; any other correct answers ***should be marked*** *based on the following rubric:*

11 3

Mark	Application (AO2) – 3 Marks
3	The response briefly explains three specific applications of data mining by a food delivery company.
2	The response briefly explains two specific applications of data mining.
1	The response briefly explains one specific applications of data mining.
0	The response does not explain any specific applications of data mining by a food delivery company.

Learning Outcome	Discuss the divers application of data mining in various sectors, including business
Learning Level	AO2
Pages	270

12.A

Answer:
Student's answer may include one of the following advantages:

1. There are online tutorials available on almost any skill or issue that a person may want information about.
2. Users can learn in their own time and at their own pace.
3. Different media can be used to create an informative tutorial.

And one of the following disadvantages:

- The quality of online tutorials may differ greatly, and some may be poor quality, meaning it is time consuming to find one that is good.
- An online tutorial could teach a person in an incorrect manner. This will depend on the ability of the person who is acting as the educator.
-

Marking guidance and rubric:

*Any other correct answers **should be marked** based on the following rubric:*

Mark	Remembering and Understanding (AO1) – 2 Marks
2	One correct advantage and one correct disadvantage are clearly stated.
1	Either one correct advantage or one correct disadvantage is stated
0	No response or incorrect response

Learning Outcome	Analyze the potential benefits and challenges of online courses. Evaluate the advantages and disadvantages of networked learning.
Learning Level	AO1
Pages	278

2

12.B	**Answer:** Student's answer may include one of the following advantages: 4. Learners get to work with other learners and build relationships that they could take forward beyond the course. 5. Learners are exposed to both the ability to gain and provide feedback. 6. This means that they build new skills and knowledge and offer the skills and knowledge they have to others also. 7. Learners may be more motivated to complete the tasks as the learning of others is also dependent on them. And one of the following disadvantages: • Some learners may find it difficult to contribute to the process, as they aren't sure what to give as feedback. • Some learners may be overbearing and dominate all the discussions that take place, not allowing enough contribution to encourage learning from others. Some tutors may find these people difficult to manage. • Learners may be inclined to just provide positive feedback as they do not feel comfortable criticizing the work of others. • If some learners do not complete tasks or provide the necessary feedback, this may limit the learning ability of other users, as the timescales for learning are more limited.	2

Marking guidance and rubric:

*Any other correct answers **should be marked** based on the following rubric:*

Mark	Remembering and Understanding (AO1)
2	One correct advantage and one correct disadvantage are clearly stated.
1	Either one correct advantage or one correct disadvantage is stated
0	No response or incorrect response

Learning Outcome	Analyze the potential benefits and challenges of online courses. Evaluate the advantages and disadvantages of networked learning.
Learning Level	AO1
Pages	278

A sample answers:

Collaborative Curriculum Development: Networked learning serves as a platform for teachers to engage in collaborative curriculum development. Educators from various locations can connect online and share their expertise to create effective curriculum materials. For instance, a group of teachers can come together to develop a comprehensive set of lessons, tailored to the latest educational standards.

OR

Peer Feedback and Best Practices Exchange: Networked learning encourages teachers to support each other's professional growth through peer feedback and the exchange of best practices. Teachers can share their classroom experiences, teaching techniques, and educational resources in a virtual community. For example, a teacher can post a video showcasing an innovative teaching method they used in their classroom. Other teachers can watch the video, provide feedback, and engage in discussions about how they can adapt and implement similar strategies in their classrooms.

Marking guidance and rubric:

13 *The answers above are just sample answers; any other correct answers* ***should be marked*** *based on the following rubric:* 2

Mark	Application (AO2) – 2 Marks
2	The response provides one practical application of networked learning in the context of teachers' professional development. The application is clear, relevant, and well-explained.
1	The response provides an application, but it may be unclear or lack proper explanation.
0	The response does not provide any practical application of networked learning in the context of teachers' professional development.

Learning Outcome	Analyze the contributions of other learners in networked learning.
Learning Level	AO2
Pages	278

A sample Answer:

Locating criminals: Many police authorities around the world use IT, for example by combining facial recognition software with CCTV footage, to monitor possible criminal activity and to locate criminals when crimes have been committed.

Marking guidance:

The answer above is just a sample answer; any other correct answers ***should be marked*** *based on the following rubric:*

Mark	Remembering and Understanding (AO1) – 1 Mark
1	The response provides one clear and correct use of IT in monitoring and surveillance, as stated in the question.
0.5	The response provides an answer related to IT in monitoring and surveillance, but it may lack clarity or precision in describing the use.
0	The response does not provide a correct use of IT in monitoring and surveillance or is not related to the topic.

14

Learning Outcome	Explain how IT is used in monitoring and surveillance.
Learning Level	AO1
Pages	283

1

A sample answer:

Student's answer may include any TWO of the following disadvantages:

- There is often a monetary limit on contactless payments.
- As data is sent electronically, there is always the risk that the transactions could be hacked.
- Some people are anxious about the thought of contactless payments, believing that they could walk near a payment machine and money could be deducted from their account.
- Some may think that people can lose track of their spending as they are not handing over physical money for the transaction.
- If a card or device is lost, it is possible for another person to use it for contactless payments, before the user has a chance to cancel it.

The discussion:

Disadvantage 1: There is often a monetary limit on contactless payments.
The monetary limit on contactless payments can encourage responsible spending by limiting the amount of money that can be spent in a single transaction. This can help individuals avoid impulsive or large purchases, promoting better financial management.

Disadvantage 2: As data is sent electronically, there is always the risk that the transactions could be hacked.
Fraudulent activities can lead to unauthorized access to accounts and theft of sensitive financial information, leading to hacked transactions. Hacked transactions can result in financial losses for individuals, businesses, and financial institutions.

Marking guidance and rubric:

15.a *The identification of each disadvantage should be awarded 0.5 mark each (0.5*2=1 mark).* 3

*The discussion of each disadvantages and its impact are worth 1 mark (1*2=2 marks).*

The provided answer is just a sample answer; any other answer ***should be marked*** *based on the following rubric:*

Mark	Remembering and Understanding (AO1) – 1 mark	Mark	Analysis (AO3) – 2 Marks
1	Two correct disadvantages are clearly stated.	2	The response provides a good brief discussion of one potential impact for each of the disadvantages, demonstrating a clear understanding of the topic.
0.5	One correct disadvantage is stated	1- 1.5	The response discusses one potential impact of each of the two disadvantages but may lack depth and or clarity. It shows some understanding of the topic.
0	No response or incorrect response	0.5	The response briefly mentions one potential impacts of one disadvantage but lacks

			discussion, example, or a clear understanding of the topic.
		0	The response does not address the question or provides an inadequate or entirely incorrect answer.

Learning Outcome	Evaluate the advantages and disadvantages of digital currency
Learning Level	AO1, AO3
Pages	266

15.b

A sample answer:

When comparing the two disadvantages in terms of significance, it becomes clear that the risk of hacking (second disadvantage) carries more weight in hindering the use of contactless payments. While the monetary limit (first disadvantage) can promote responsible spending, it's a relatively minor inconvenience in most cases.

So, in response to the more significant disadvantage of the risk of being hacked, individuals are strongly recommended to take proactive steps to enhance the security of their digital payment methods. This includes using secure payment providers, enabling two-factor authentication, monitoring transactions regularly, keeping software up to date, and educating themselves about digital security practices. By addressing the risk of hacking, users can mitigate a more substantial and potentially harmful issue associated with contactless payments.

2

Marking guidance and rubric:

The answer should start by commenting on each disadvantage (summarizing and linking the discussion finding – 0.5 mark), then it should provide a well-written comparative evaluation comment (which disadvantage has more significance – 0.5 mark), and finally provide and briefly explain a recommendation (to mitigate the negative impacts of the more significant disadvantage – 1 mark)

The provided answer is just a sample answer; any other answer ***should be marked*** *based on the following rubric:*

Mark	Evaluation (AO4) – 2 Marks
2	The response provides a comprehensive evaluation by summarizing and linking the discussion findings of each disadvantage, offering a well-written comparative evaluation comment, and providing a clear and relevant recommendation.
0.5 – 1.5	The response may offer some evaluation, but it lacks depth, clarity, or may not fully summarize and link the discussion findings of each disadvantage. The comparative evaluation comment might be unclear or not well-supported, and the recommendation may lack detail or relevance.
0	The response does not address the question, provide a sufficient evaluation, or may entirely miss the point.

Learning Outcome	Evaluate the advantages and disadvantages of digital currency
Learning Level	AO4
Pages	266

16.a

A sample answer:

One negative impact: The growing concern about the use of social networking is that it has created a generation that needs a sense of immediacy to everything they do.

The constant demand for immediate responses and the fast-paced nature of social networking can lead to challenges in maintaining deeper and more meaningful relationships. **Here are two key factors contributing to this impact:**

1. Social networking often encourages quick and superficial interactions. People engage in brief chats, likes, or emoji to respond promptly. This can lead to a lack of in-depth conversations and more profound connections. As individuals become accustomed to this rapid style of communication, it can be challenging to establish and sustain deeper, meaningful relationships.

3

2. The need for immediacy also promotes a habit of being constantly connected to social networks, which can divide an individual's attention between virtual and real-life interactions. People may find it difficult to fully engage in face-to-face conversations or activities because they are preoccupied with checking notifications and messages on their devices. This can hinder the quality of relationships as individuals struggle to give their full attention and presence to those they are with.

Marking guidance and rubric:

*The provided answer is just a sample answer; any answer **should be marked** based on the following rubric:*

Mark	Remembering and Understanding (AO1) – 1 mark	Mark	Analysis (AO3) – 2 Marks
1	The response successfully identifies one major valid concern associated with the use of social networking by individuals.	2	The response effectively examines two factors contributing to the impact identified in A, providing clear and insightful analysis of these factors and their role in the impact. The explanation demonstrates a deep understanding of the topic.
0.5	The response partially addresses the question but lacks clarity or provides an incomplete or less accurate identification of the concern.	1- 1.5	The response discusses one or two factors contributing to the impact but may lack depth, clarity, or specific examples. It shows some understanding of the topic.
0	The response does not address the question or provides an entirely incorrect response.	0.5	The response briefly mentions one or two factors contributing to the impact but lacks in-depth discussion, examples, or a clear understanding of the topic.
		0	The response does not address the question or provides an insufficient or entirely incorrect response.

	Learning Outcome	**Discuss the negative impacts of social networking on individuals.**	
	Learning Level	AO1, AO3	
	Pages	276	
16.b	**A sample answer:** One possible solution is the scheduled screen time and digital detox: Individuals should establish a daily schedule for social media usage and designate specific times for checking notifications and engaging with social networks. Additionally, they should incorporate digital detox periods into their routines, during which they disconnect from social media entirely. This approach helps in reducing the constant urge to check for updates and encourages more mindful usage of social networking platforms. **Marking guidance and rubric:** *The provided answer is just a sample answer; any other answer **should be marked** based on the following rubric:*		2

Mark	Evaluation (AO4) – 2 Marks
2	The response effectively suggests a practical solution to mitigate the impact. The solution is well-reasoned and demonstrates an understanding of the topic, providing a clear and concise recommendation.
0.5 – 1.5	The response may suggest a solution but lacks depth or may not fully explain the solution's practicality or relevance. The recommendation may be less clear or concise.
0	The response does not address the question or provides an insufficient or entirely incorrect response.

Learning Outcome	**Discuss the negative impacts of social networking on individuals.**
Learning Level	AO4
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17.A

Answer:

```
<script>
alert ("Welcome to the website")
var message = prompt ("Are you sure you want to proceed?")
var result = confirm ("what is 2+3?")
</script>
```

The errors are:

- *The Prompt function should be prompt with a lowercase "a."* *(1 mark)*
- *In the prompt function, there's a period (.) after prompt* *(1 mark)*

2

Learning Outcome	Write the syntax of displaying prompt box. .
Learning Level	AO2
Pages	472

17.B

Answer:

1. First, a browser alert box will be displayed with the message "Welcome to the website." The execution stops briefly while the user acknowledges the alert by clicking "OK." (1 mark)

2. Second, a prompt dialog box with the message "Are you sure you want to proceed?" will appear and will allow the user to input a response. The user's input (if provided) is stored in the variable message. (1 mark)

2

Learning Outcome	Analyze the difference between alert, confirm, and prompt in terms of their and output.
Learning Level	AO3
Pages	472

A sample Answer:

One way in which the VAR system can be used by Beyond-Horizon to enhance the accuracy of refereeing decisions could be:

VAR can be used to accurately determine whether a goal has been scored or not. It does this by employing specialized camera systems and computer algorithms to track the exact position of the ball in relation to the goal line. This technology ensures that referees can make precise decisions about whether a goal has been scored.

Marking guidance and rubric:

The provided answer is just a sample answer. All other correct answers ***should be marked*** *based on the following rubric:*

Mark	Application (AO2) – 2 Marks
2	The response correctly identifies one way in which VAR enhances the accuracy of refereeing decisions and provides a clear and accurate description of that way.
1	The response identifies one way accurately but lacks a clear or accurate description.
0	The response is incorrect or incomplete

18.A 2

Learning Outcome	Evaluate the effectiveness of IT systems like VAR in enhancing the accuracy of refereeing decisions.
Learning Level	AO2
Pages	280

18.B

A sample answer:

One potential benefit of using the VAR system in football matches is improved accuracy in officiating decisions. VAR provides an additional layer of review for crucial game-changing moments, such as goals, penalties, and red card incidents. Referees can use VAR to ensure that they make the right decisions, reducing the likelihood of human error that can have a significant impact on the outcome of a match. This benefit enhances the overall fairness and integrity of football competitions.

However, a potential drawback of using the VAR system is the potential impact on the flow and enjoyment of the game. VAR reviews can lead to delays in the match as referees and officials analyze video footage. This interruption can disrupt the natural rhythm and excitement of the game, causing frustration among players and fans. The stop-and-start nature of VAR decisions can reduce the enjoyment of football matches, especially when goals are disallowed or penalties are awarded after a significant delay.

Marking guidance and rubric:

A full mark response should discuss one potential benefit and one impact of it (1 mark), as well as one potential drawback and one impact of it (1 mark).

The provided answer is just a sample answer. All other correct answers ***should be marked*** *based on the following rubric:*

Mark	Analysis (AO3) – 2 Marks
2	The response discusses one potential benefit and one impact of it as well as one potential drawback and one impact of it.
1.5	The response fully discusses one aspect (benefit or drawback) and identifies the other aspect without discussion.
1	The response discusses only one aspect (benefit or drawback) with a clear explanation and one potential impact or consequence.
0.5	The response provides either one benefit or one drawback. However, the provided benefit or drawback is vague and unclear.
0	The response does not address the question or provides no meaningful information.

Learning Outcome	Evaluate the effectiveness of IT systems like VAR in enhancing the accuracy of refereeing decisions.
Learning Level	AO3
Pages	281

2

A sample Answer:

On the one hand, the benefit of improved accuracy in refereeing decisions is a significant advantage. VAR helps ensure that the right calls are made, reducing the impact of human error on the outcome of matches. This, in turn, contributes to the overall fairness and integrity of football competitions. On the other hand, a critical factor to consider is the negative impact of the VAR on the flow and enjoyment of the game. The interruptions caused by VAR reviews can disrupt the natural rhythm of the match and lead to frustration among players and fans. The delays in decision-making can reduce the excitement and enjoyment of football matches.

So, the effectiveness of VAR in football matches largely depends on how well the system is implemented and managed. To be truly effective, VAR should minimize disruptions and delays while maintaining its primary objective of improving refereeing decisions.

Marking guidance and rubric:

A full mark response should summarize the discussion of both the benefit and drawback (1 mark), and provide a balanced evaluative comment briefly mentioning one general recommendation without explaining this recommendation (1 mark)

18.C *The provided answer is just a sample answer. All other correct answers* ***should be marked*** *based on the following rubric:* 2

Mark	Evaluation (AO4) – 2 marks
2	The response provides a balanced evaluation by summarizing both the benefit and drawback of using the VAR system in football matches and briefly mentioning one general recommendation without explaining it.
0.5 – 1.5	The response provides a summary of the benefit and drawback but lacks a balanced evaluative comment .
0	The response does not provide an effective evaluation or fails to address both the benefit and drawback.

Learning Outcome	Justify his/her own viewpoint on the use of IT in sports.
Learning Level	AO4
Pages	280

[End of the Marking Guide]