2024 HSC Information and Digital Technology Marking Guidelines

Section I

Multiple-choice Answer Key

Question	Answer
1	D
2	C
3	C
4	B
5	C
6	A
7	D
8	C
9	C
10	A
11	D
12	B
13	D
14	C
15	C

Section II

Question 16 (a)

Criteria	Marks
• Outlines TWO strategies to maintain work–life balance	2
• Provides some relevant information	1

Sample answer:

Only view emails or take phone calls from your employer during work hours. Setting realistic goals and prioritising daily weekly work tasks.

Question 16 (b)

Criteria	Marks
• Describes an advantage for an employee transferring technical skills from one workplace to another	2
• Provides some relevant information	1

Sample answer:

Transferring technical skills from one workplace to another can help an employee quickly adapt to different work practices and ease their transition to a new role. Transferring technical skills to a new workplace can also reduce the amount of training time that is needed.

Question 17 (a)

Criteria	Marks
• Outlines how two-factor authentication can strengthen data security in a workplace with an example	2
• Provides some relevant information	1

Sample answer:

Adds additional level of security to double check users' identity and provide stronger protection to prevent unauthorised access to company data or information, by SMS or email verification.

Question 17 (b)

Criteria	Marks
• Explains TWO strategies to minimise data loss	3
• Explains ONE strategy to minimise data loss OR • Identifies TWO strategies to minimise data loss	2
• Provides some relevant information	1

Sample answer:

The company should implement practices for backing up by having on-site and off-site backup procedures, whilst ensuring that server software updates and hardware maintenance are regularly occurring.

Question 18 (a)

Criteria	Marks
• Describes strategies that the company could implement	3
• Outlines safe work practices	2
• Provides some relevant information	1

Sample answer:

The company could have interactive learning that utilises online courses with fun activities like quizzes and videos. It could also get employee feedback on their thoughts on the training to find ways to make the training better.

Question 18 (b)

Criteria	Marks
• Explains how workplace injuries affect business productivity and workplace practices	4
• Describes how workplace injuries impact on business productivity and workplace practices	3
• Shows some understanding of the cost of workplace injuries	2
• Provide some relevant information	1

Sample answer:

Workplace injuries can impact and limit the level of productivity by slowing down the business level of products or services. Employees may have to take on extra responsibilities to ensure that the business continues to operate effectively which can cause work related stress. Workplace injuries can affect workplace practices by limiting the job tasks that are to be completed due to injured employees being off work and not enough employees to cover workplace tasks and duties. Workplace injuries will add increased business costs from absent injured workers.

Question 19 (a)

Criteria	Marks
• Provides the correct answer	1

Sample answer:

$20

Question 19 (b)

Criteria	Marks
• Provides an algorithm that addresses all steps	5
• Provides an algorithm that addresses most steps	4
• Provides an algorithm that addresses some steps	3
• Shows some features of algorithm	2
• Provides some relevant information	1

Sample answer:

```
BEGIN
      Total = 0
      More = People = 'Y'
      REPEAT
            Fee = 10
            Input age
            IF Age <13 OR Age > 65 THEN
                  Fee = 5
            END IF
            Total = Total + Fee
            Ask if more people
      Until More = People = 'N'
      Display Total
END
```

Question 20 (a)

Criteria	Marks
• Outlines advantages and disadvantages of storing workplace information on-site and off-site	4
• Outlines advantages or disadvantages of storing workplace information on-site and off-site OR • Identifies advantages and disadvantages of storing workplace information on-site and off-site	3
• Identifies an advantage and a disadvantage	2
• Provides some relevant information	1

Sample answer:

Advantages of on-site storage include faster access to data, do not need to rely on external server or cloud storage and data stored locally. Disadvantages of on-site storage may include the workplace being open to on-site threats and physical disasters – fire/theft/vandalism. A higher outlay of initial costs for hardware and software setup and prone to hardware failures.

Advantages of off-site storage means that data is protected from on-site threats and minimal maintenance is required and lower cost involved in storage practices. Disadvantages of off-site storage include slower access to data, more dependent on reliable/stable internet/network connection and dependent on external server provider.

Question 20 (b)

Criteria	Marks
• Describes consequences of copyright infringement for this business	3
• Describes consequences of copyright infringement	2
• Provides some relevant information	1

Sample answer:

The business may have to make a financial payment to the copyright holders to compensate them for the unauthorised use of their code. The business may have to pay for the copyright owner profits that they make using the copyright material. Legal action can be taken against the infringer that may result in legal ramification or criminal penalties.

Question 21 (a)

Criteria	Marks
• Explains how formal and informal feedback can be used by the supervisor to improve work performance, with examples	3
• Describes how formal and informal feedback can be used by the supervisor to improve work performance, with an example	2
• Provides some relevant information	1

Sample answer:

Using both formal and informal feedback, a supervisor can enhance employee work performance. Formal feedback sets clear expectations. This can be done during the annual employee performance review, while informal feedback allows for real-time adjustment and ongoing support given during daily conversations or team meetings.

Question 21 (b)

Criteria	Marks
• Describes how the employee can deal with the situation	3
• Outlines ways the employee deal with the situation	2
• Provides some relevant information	1

Sample answer:

The employee could take initiative to clarify the issues and make sure all concerns have been recorded. The employee could use open ended questioning techniques and conflict resolution strategies. The employee can also seek advice in problem solving from higher levels of authority and ability in the workplace.

Section III

Question 22 (a)

Criteria	Marks
• Outlines factors to consider when conducting initial research about the application	3
• Identifies factors to consider when conducting initial research OR • Outlines a factor to consider	2
• Provides some relevant information	1

Sample answer:

When conducting initial research about the application, the team needs to consider questions from different perspectives, including developers, client and users. They also need to look at information from different sources, analyse facts and data, and consider alternatives.

Question 22 (b)

Criteria	Marks
• Describes strategies the team can use to help them plan their work and meet the project deadlines	4
• Outlines strategies the team can use to help plan their work OR meet the project deadlines	3
• Identifies strategies the team can use to help them plan their work or meet the project deadlines	2
• Provides some relevant information	1

Sample answer:

To improve work performance, the team could nominate a project leader to delegate tasks based on skill and experience level.

Implementing a project timeline that clearly lists all project steps. It will indicate who is responsible and the duration and completion date of tasks.

Having a dedicated project leader to allocate tasks will ensure tasks are completed.

Having a project timeline with tasks to complete will keep a record of task progress, team cohesiveness and task completion.

Question 22 (c)

Criteria	Marks
• Provides a comprehensive explanation of methods for testing the effectiveness of ideas while referencing the scenario	8
• Provides a thorough explanation of testing methods while referencing the scenario	6–7
• Describes sound testing methods	4–5
• Identifies some testing methods OR • Outlines a testing method	2–3
• Provides some relevant information	1

Sample answer:

To test the effectiveness of a prototype idea, team could use usability testing, prototype walkthroughs, and surveys to gather feedback about the application.

This feedback will allow the team to refine and redevelop the prototype if necessary and clarify the assumptions made by the team.

Usability testing involves users being observed on their interactions with prototype and noting any areas of confusion and difficulty.

Prototype walkthroughs involve presenting prototype to key stakeholders and users to gather feedback on its design, functionality and features. This helps to identify any areas of improvement and additional features that may be necessary.

Answers could include:

- Testing by team members
- Checking alignment with specifications
- Review feedback by client, customers, specialists
- Interviews, focus groups and discussions.

Section IV

Question 23

Criteria	Marks
• Demonstrates a comprehensive understanding of the issues associated within the scenario • Provides a logical and cohesive, response that reflects a high level of organisation • Consistently uses relevant workplace examples and industry terminology	13–15
• Demonstrates a thorough understanding of the issues associated within the scenario • Provides a logical response that reflects a high level of organisation • Uses some workplace examples and industry terminology	10–12
• Demonstrates a sound understanding of the issues associated within the scenario • Provides a response displaying sound organisation • Uses some workplace examples and/or industry terminology	7–9
• Demonstrates some understanding of the issues associated within the scenario • Provides a response displaying some organisation • Refers to workplace examples and/or industry terminology	4–6
• Demonstrates a basic understanding of the issues in the scenario • Provides a response displaying basic organisation	1–3

Answers could include:

- Internal and external client/users within the ICT industry
- Workplace protocols and procedures in relation to lines of communication and referral of client/user requests, and investigation of issues
- Processes for client/user liaison and provide advice and clarify support needs
- Workplace record keeping requirements and/or guidelines to document client/user requests or issues, solutions and actions taken
- Notifiable data breaches
- Cyber security in the workplace
- In relation to internal and external non-compliance infringements of IP, ethics, privacy, policy and procedures.

2024 HSC Information and Digital Technology Mapping Grid

Section I

Question	Marks	HSC content – focus area
1	1	Innovation — ideas and responses – page 21
2	1	Working in the industry — application requirements – page 39
3	1	Working in the industry — code testing and evaluation – page 40
4	1	Safety — WHS compliance – page 30
5	1	Innovation — client/user support services – page 23
6	1	Innovation — questioning mindset – page 20
7	1	Safety — WHS compliance – page 30
8	1	Working in the industry — employment – page 36–37
9	1	Protecting data — intellectual property (IP), ethics and privacy – page 27
10	1	Safety — hazard identification and risk management – page 32
11	1	Working in the industry — programming – page 40
12	1	Protecting data — handling, sharing and storing PII and workplace information – page 26
13	1	Innovation — challenge, tests and reinvent ideas – page 21
14	1	Working in the industry — programming – page 40
15	1	Working in the industry — coding, testing and evaluation – page 41

Section II

Question	Marks	HSC content – focus area
16 (a)	2	Working in the industry — ICT industry worker – page 37
16 (b)	2	Working in the industry — work practices – page 37
17 (a)	2	Protecting data — handling, sharing and storing PII and workplace information – page 26
17 (b)	3	Protecting data — handling, sharing and storing PII and workplace information – page 26
18 (a)	3	Safety — WHS consultation and participation – page 31
18 (b)	4	Safety — incidents, accidents and emergencies – page 33–34
19 (a)	1	Working in the industry — programming – page 40
19 (b)	5	Working in the industry — application requirements – page 39
20 (a)	4	Protecting data — handling, sharing and storing PII and workplace information – page 26
20 (b)	3	Protecting data — intellectual property (IP), ethics and privacy – page 27
21 (a)	3	Working in the industry — ICT industry worker – page 37
21 (b)	3	Working in the industry — ICT industry worker – page 37

Section III

Question	Marks	HSC content – focus area
22 (a)	3	Innovation — questioning mindset – page 20
22 (b)	4	Working in the industry — working with others – page 39
22 (c)	8	Innovation — challenge, test and reinvent ideas – page 21

Section IV

Question	Marks	HSC content – focus area
23	15	Innovation — client/user support services – page 23 Protecting data — compliance – page 25–26 Protecting data — non-compliance – page 28