



BCS Level 4 Module in Digital Core

Sample Paper

Record your surname / last / family name and initials on the answer sheet.

Sample paper only consisting of 40 questions in total:

- 20 knowledge questions that include multiple choice, multiple response, and fill in the blanks question types – 1 mark awarded for each question.
- 4 scenario-driven, situational judgement assessments each with five questions, designed to test knowledge, skills and behaviours that include multiple choice and multiple response question types – 1 mark awarded for each question.

A number of possible answers are given for each multiple choice or multiple response question, indicated by either **A B C D (or E)**. Other questions will require you to fill in the blanks. Your answers should be clearly indicated on your answer sheet.

Pass mark is 26/40.

Distinction mark is 34/40.

Time allowed: 90 minutes.

Copying of this paper is expressly forbidden without the direct approval of BCS, The Chartered Institute for IT.

This is a United Kingdom government regulated qualification which is administered and approved by one or more of the following: Ofqual, Qualifications Wales, CCEA Regulation or SQA.

- 1 Which of the following is an example of an organisational vision statement?
- A To power the world with sustainable energy solutions.
 - B To increase market share by 10% within the next financial year.
 - C To improve customer satisfaction through clear communication.
 - D To reduce energy consumption by 25% within the next two years.
- 2 Which of the following factors is directly influenced by an organisation's culture?
- A Competitor performance.
 - B Employee behaviour.
 - C Legal and regulatory compliance.
 - D Financial performance.
- 3 A small retail company plans to double in size over the next 18 months. They are considering investing in an "off-the-shelf" e-commerce platform as a means to grow their customer base online.
- Which of the following elements should be considered **first** to determine whether to invest in this solution?
- A The cost of the platform.
 - B Other competitor offerings.
 - C The potential customers and their buying habits.
 - D Capability of staff to use the platform.
- 4 Cyber security may involve monitoring - covert or overt - a user's activity, including browsing history and communications. Which **three** of the following are likely to be societal concerns relating to this activity?
- A Privacy.
 - B Human rights.
 - C Cost.
 - D Fraudulent use.
 - E Infrastructure scalability.

5 Which of the following devices connects multiple computers or network devices together?

- A Firewall.
- B Hub.
- C Router.
- D WAP.

6 Complete the following statement by filling in the blanks using the blank options provided below.

When incidents of non-compliance with security procedures occur, organisations may experience (A) _____ operations, leading to a poor customer experience and potential (B) _____ impact. Such activity could also generate other (C) _____ elsewhere on the network.

Blank options:

- A. interrupted, boosted, increased, poor
- B. reputational, social, legal, ethical
- C. vulnerabilities, users, costs, applications

7 Which of the following security features used by an operating system would help to prevent an unknown person from logging into a device?

- A Data encryption.
- B Firewall.
- C Authentication.
- D Virus protection.

8 In terms of programming logic, which of the following describes a function?

- A A container for different types of data.
- B A sequence of instructions that are continually repeated.
- C A module of code designed to accomplish a specific task.
- D An expression used to make decisions based on true or false.

- 9 An organisation has a body of big data that is yet to be processed. This data is a by-product of the interactions between users and the organisation's social media account, and largely consists of comments.

How would you best categorise this type of data?

- A Unstructured, qualitative.
 - B Unstructured, quantitative.
 - C Structured, qualitative.
 - D Structured, quantitative.
- 10 Under the Data Protection Act 2018, what is the person or entity to whom the data relates to known as?
- A Data controller.
 - B Data subject.
 - C Data processor.
 - D Data owner.
- 11 You have been tasked to put together the specification for a standard set of IT equipment to be used by remote workers. Which **two** of the following should you prioritise when considering the user requirements?
- A Understanding the budget that the IT department has available to spend.
 - B Considering how the user's information will remain secure when using the device.
 - C Ensuring the user will be able to access the network if their home Wi-Fi connection fails.
 - D Understanding how the user will use the device and for what purposes.
 - E Ensuring the processor has a minimum of four cores to enable efficient working.

- 12 An organisation is considering implementing a new AI technology to automate parts of its customer services function.

In terms of the organisation's culture, which **two** of the following internal factors are **most likely** to influence the success of the project?

- A The organisation's competitors and their reputation.
 - B The organisation's appetite for risk.
 - C The willingness of its staff to adopt new ways of working.
 - D The requirements of legislation that must be adhered to.
 - E The organisation's IT infrastructure.
- 13 In order to support in delivering the transformation plans for an organisation, the senior team have set up a number of projects. This will require the creation of project teams that will include members from different functional areas across the business who will report to a project manager whilst still continuing their day-to-day work.

Which of the following structures will best support this type of working?

- A Flat structure.
 - B Hierarchical structure.
 - C Matrix structure.
 - D Functional structure.
- 14 A manager of IT technicians is looking for ways to improve the performance of their team in order to increase the number of devices installed each month. Which of the following should they do **first**?
- A Set new KPIs for each individual in the team.
 - B Review the current status of each of their competitors
 - C Schedule a weekly meeting to check on progress.
 - D Review performance and any barriers to productivity with team members.

- 15** Which of the following statements is true of object-oriented programming languages?
- A** Once a value is assigned to a variable, it cannot be changed.
 - B** They make use of classes to structure the code into organised and reusable elements.
 - C** They are used to run a set of functions that run in a pre-defined order.
 - D** They are a declarative language that focuses on what needs to be achieved, rather than how it will be achieved.
- 16** Which **two** of the following programming languages are most commonly used in data analysis?
- A** Python.
 - B** PHP.
 - C** R.
 - D** JavaScript.
 - E** Objective-C.
- 17** Which **two** of the following statements best align with the principles of an agile working environment?
- A** Development follows a pre-determined sequence of stages.
 - B** Customer involvement is limited until the end of a project.
 - C** Smaller outputs are delivered more frequently.
 - D** Outputs are only made live once the project is complete.
 - E** Changing requirements are welcomed later on in the project.

- 18** You have been asked to provide an update to senior management on a project that you are currently involved in to deliver a bespoke software application for the business.

Due to additional stakeholder requirements being identified late on in the project, there is a need to invest in further resources to deliver the outputs that have not been originally budgeted for.

Which of the following should you prioritise when preparing to deliver your update?

- A** You should prepare a set of written answers to all the possible questions that may be asked during the meeting.
 - B** You should prepare an assessment of the effort, resources, timeline and risks of the additional work.
 - C** You should prepare a list of the names of the people who have requested the additional requirements.
 - D** You should highlight that the change is not agreed upon in the initial requirements.
- 19** During which stage of the systems development lifecycle are requirements gathered to understand the needs and objectives of stakeholders?
- A** Feasibility.
 - B** Development
 - C** Analysis.
 - D** Implementation.
- 20** An organisation has decided to invest in cloud infrastructure. Which **two** of the following are potential benefits of implementing this technology?
- A** Enhanced security through fingerprint recognition.
 - B** Increased collaboration between different teams.
 - C** Greater capability for disaster recovery.
 - D** Improved security through local storage.
 - E** Decreased reliance on internet connectivity

Scenario 1: Understanding the business

This scenario relates to questions 21 – 25.

You are employed by a large web development company that recently acquired a small, family run marketing business. They intend to rebrand and operate it as an extension to their current offering. The structure and culture of the two organisations are very different.

- 21** As part of the acquisition, employees of the marketing business have been invited to attend an onboarding session to help familiarise them with the culture and values of the organisation they're joining.

Which **two** of the following items would be most helpful to demonstrate the strategic direction of the organisation?

- A** The organisation's mission and vision statement.
- B** The organisation's company handbook.
- C** A summary of recent press coverage.
- D** Details of the organisation's financial performance to date.
- E** A copy of the organisation's five year plan.

- 22** The company hopes that its acquisition of the marketing business will help it improve brand awareness, enhance customer engagement and expand its market share.

One of the company's specific objectives is "to increase brand visibility and recognition among the target audience through online marketing channels".

Which of the following is the **best** example of a KPI that would effectively help the company evaluate and track progress in achieving its objective?

- A** Achieve a social media engagement rate of 8% within the next quarter.
- B** Improve online presence and digital marketing efforts.
- C** Reduce operating expenditure by 5% in the next financial year.
- D** Carry out customer surveys to determine customer satisfaction levels.

23 The long-term vision of the organisation is to sell their shares on the open stock market. Which of the following **best** describes an organisation that sells its shares on a stock exchange?

- A** Private limited company.
- B** Public limited company.
- C** Sole trader.
- D** Not for profit organisation.

24 As the business plans to expand in the coming years, the software being used must be considered. Which of the following activities should be completed **first**?

- A** Review available options, considering their cost, functionality and scalability.
- B** Present a business case with your suggestions.
- C** Confirm the organisation's requirements from the software.
- D** Consider the suitability and scalability of the existing software.

25 The organisation has identified an opportunity to invest in software that uses machine learning algorithms, which could enable a greater level of insight to be gained about its customers and their activities from the data generated via the website and social media. This technology has the potential to support the business to create more accurate and effective targeted marketing campaigns.

Which **two** of the following must the organisation have in place should they invest in the software?

- A** A single expert who will use the software.
- B** A clear understanding of what data is required.
- C** A defined process for handling the data.
- D** Someone new to managing the website and social media.
- E** An understanding of the short-term cost of the investment.

Scenario 2: Cyber Security

This scenario relates to questions 26 – 30.

You are employed within a government body. Due to the nature of the work undertaken, there is considerable risk of cyber threats and attacks, and therefore, extensive security processes and procedures are in place.

- 26** The organisation's servers are set to perform a full backup every evening. Each time this operation is performed, it costs £68 in overhead costs.

Select your justification for suggesting continuing or quitting this operation. Select **two** of the following options.

- A** Ceasing daily backups and performing this operation weekly would be sufficient to protect the data.
- B** Continuing this operation shows commitment to customer service.
- C** Continuing this operation ensures a high level of protection from loss of data.
- D** Ceasing this operation would generate a saving which far outweighs the risks of data loss.
- E** Continuing this operation will encourage a greater level of stakeholder trust in the organisation.

- 27** Despite completing the required training, a member of staff fears they may have fallen victim to a social engineering attack, sharing confidential information with a third-party. As their line manager, the staff member reports their concern to you.

What is the **first** action you should take to manage the potential breach?

- A** Inform any affected clients, internal stakeholders, or other interested parties.
- B** Interview the employee about the potential attack to ascertain the timeline of events and what information has been shared.
- C** Complete refresher training - including practice exercises - with all employees.
- D** Inform the compliance team of a potential security breach.

- 28** The organisation has begun to encourage its staff to work more flexibly, in terms of where they work, as part of a new initiative to improve working conditions and enhance productivity.

Which **two** of the following activities would ensure a robust approach towards information security is maintained?

- A** Carrying out regular system maintenance to identify and address security vulnerabilities.
- B** Allowing employees to log onto the network using personal devices if they have multi-factor authentication enabled.
- C** Providing ongoing training to ensure that employees understand best practices and how to reduce risks.
- D** Using vendor-supplied default configurations for all software.
- E** Mandating that employees change their passwords every 60 days.

- 29** Many of the organisation's employees are becoming increasingly vigilant following a recent cyber attack and a number of concerns have been reported to you.

Which **two** of the following concerns should you investigate further as a priority?

- A** Employees receiving scheduled prompts to update their login credentials.
- B** A sudden increase in incoming emails from external parties.
- C** Issues with license expiration for a particular software application.
- D** Unannounced changes to files and file structures.
- E** Isolated reports of slow computer performance.

30 The following passage exists in the organisation's IT Incident Response procedure:

"Any suspected or confirmed threat must be escalated to the Security Incident Response Team (SIRT) without delay. This contact must be made via telephone using the contact details provided. SIRT will alert the necessary teams, seek to secure the network, and restore any loss of service as soon as possible.

Where incidents cannot be resolved internally or pertain to criminal activity, these shall be reported to the relevant authorities by SIRT. Any immediate risk of physical harm or threat to employees, premises or property should be reported to emergency services immediately."

Considering this, what is the **most likely** impact of a delay in reporting a threat in this organisation?

- A** Interrupted operations or loss of service.
- B** Risk of harm to employees, premises or property.
- C** Significant financial loss.
- D** Cyber criminals evade prosecution.

Scenario 3: Networks, systems and applications

This scenario relates to questions 31 – 35.

You have been contracted to set up a new computer network for a dental company that has two practices (main site and branch site). In terms of electronic communication, the company currently relies on email, including for the sharing of patient data and organisational documents between sites. The two branches do not share a computer system.

The owners would like you to set up a server to store all documents and help them select and implement various types of business support software.

- 31** Each site has three surgeries, and staff must ensure that these are always fully stocked with the necessary equipment for dental treatments in order to maintain safe and effective operation.

How could the introduction of a stock control software application benefit the business? Typical functionality of such applications include the ability to store data in relation to stock levels, cost of materials and order history.

Select **two** of the following options.

- A** It would help to improve demand forecasting.
 - B** It would help to improve client retention.
 - C** It would help dentists choose the best quality items.
 - D** It would help set treatment charges.
 - E** It would help improve the marketing strategy.
- 32** You are in the process of deciding on the type of server to be set up for the main site. Which of the following is **best** suited for storing patient records?
- A** Application server.
 - B** Proxy server.
 - C** File server.
 - D** Web server.

- 33** You have suggested that all client and appointment data be stored in a cloud platform to allow both sites access.

You have been asked to explain the business benefits of storing data in this manner. Which **two** reasons would justify this choice?

- A** It removes the need for staff to carry out cyber security awareness training.
- B** It prevents having to duplicate data across the two sites.
- C** It increases workflow efficiency by facilitating collaboration.
- D** It eliminates the risk of data breaches and unauthorised access.
- E** It ensures compliance with data protection laws.

- 34** After setting up the new network, a number of staff have logged IT helpdesk tickets due to the fact that they are unable to access the organisation's HR web portal.

Which component of the network should you check first when troubleshooting this issue?

- A** Switch.
- B** Firewall.
- C** Router.
- D** Hub.

- 35** You performed a stakeholder analysis to identify the people who would be affected by the change in IT infrastructure and now plan to use the Power/Interest Matrix to prioritise and manage the identified stakeholders.

Which of the following factors is **least relevant** for you when undertaking this activity?

- A** A stakeholder's ability to influence the outcomes of the project.
- B** A stakeholder's level of interest in the project.
- C** A stakeholder's level of support for the project.
- D** A stakeholder's level of technical expertise in the project domain.

Scenario 4: Data

This scenario relates to questions 36 – 40.

A local animal shelter is overwhelmed by the number of animals in their care. They want to create a 'dating' app to connect animals with prospective new pet parents.

They wish to be able to match the animals' characteristics with the needs of the new pet parents e.g. child friendly Y/N, breed, species, activity level etc.

Some adopters are concerned about how their data will be stored and used.

- 36** Your team are working with the controller to determine which data should be collected and processed to ensure that the app complies with the Data Protection Act.

What would be the **most appropriate** way to create data on potential adopters?

- A** Volunteers can research potential adopters on social media and input their data into the app.
 - B** Potential adopters can input their preferences when creating an account.
 - C** Data can be acquisitioned from a similar animal shelter.
 - D** Data on people who had previously completed the adoption process can be reused.
- 37** You have collected data relating to a number of different categories. Which **three** of the following items are examples of structured data?
- A** Animal breed.
 - B** Age of animal.
 - C** Photos of animal.
 - D** Activity level.
 - E** Notes from shelter staff.

38 In the future, the shelter has plans to scale up and integrate their app with other systems. Which **two** of the following would be considered good coding practice when developing the app to help the shelter achieve these plans?

- A** Copying and pasting code to reuse helpful sections.
- B** Always using open source code wherever possible to ensure portability.
- C** Using comments that add context.
- D** Using standard naming conventions.
- E** Making all code as concise as possible.

39 One of the stakeholders in the shelter has asked you to justify the resources spent gathering and analysing data from potential adopters.

Which **two** of the following best explain the use of data in this context?

- A** It makes it possible to send marketing to all adopters.
- B** It increases the amount of useful data that there might be a possible future use for.
- C** It can inform strategic decision making and planning.
- D** It enables the identification and prediction of trends.
- E** It can be sold to third parties for a profit, raising money for the shelter.

40 The app is now in build and you have recommended incorporating conditional logic in order to enhance the efficiency, accuracy and effectiveness of the matchmaking process.

Which of the following is an example of conditional logic in the application?

- A** The app can be used to check how many of each breed of animal there are in the shelter.
- B** Data on the animals' characteristics can be inputted by the volunteers.
- C** The app uses filters to display certain species, breeds or characteristics.
- D** There are currently 13 rabbits at the same shelter.

End of Paper

BCS Level 4 Module in Digital Core Answer Key and Rationale

| Question | Answer(s) | Learning Outcome | Rationale |
|----------|---------------|------------------|---|
| 1 | A | 1.2 | An organisational vision is a forward-looking statement that articulates the long-term aspirations and goals of the organisation. The other options focus on specific short-term objectives (which might help the organisation to achieve its vision). |
| 2 | B | 2.1 | Organisational culture shapes how employees behave and how they perceive their work environment. |
| 3 | C | 2.2 | Before investing in a solution such as this, the organisation should have a clear understanding of their market, who their potential customers are and their buying habits. Without this information they will not be able to make an informed decision. |
| 4 | A, B, D | 3.1 | With greater levels of security being implemented online to monitor user activity (with the intention to protect others), there are growing concerns over the freedoms, privacy and rights of individuals. Equally, there are growing concerns about how these methods may be employed for unethical and fraudulent purposes. |
| 5 | B | 4.4 | Hub = Used to connect multiple computers or network devices together. Firewall = Used to monitor and filter traffic. Router = Used to connect a local network to the internet. WAP = Used to enable wireless devices to connect to a network. |
| 6 | See rationale | 3.3 | When incidents of non-compliance with security procedures occur, organisations may experience interrupted operations, leading to a poor customer experience and potential reputational impact. Such activity could also generate other vulnerabilities elsewhere on the network. |
| 7 | C | 4.2 | Authentication is a feature used by an operating system to verify the identity of the individual attempting to access the device or application. |
| 8 | C | 6.4 | A function is a module of code designed to accomplish a specific task. The other answers refer to variables, loops and conditionals. |

| | | | |
|----|------|------------|--|
| 9 | A | 5.1 | Data produced through the interactions of users online and through social media is typically unstructured and, therefore, needs to be processed before it can be used. Any descriptive data, such as comments, is qualitative data rather than numeric data, which is quantitative. |
| 10 | B | 5.4 | In terms of data protection, the subject refers to the individual or entity to whom the data relates. It is the person, organisation, or entity that is the subject of the data being collected, processed, or stored. |
| 11 | B, D | 1.4 7.1 | Although the budget should be considered when proposing a solution, the needs of the user should be considered first. This relates to how they will use the device, as well as any security and accessibility requirements to ensure safe working practices. |
| 12 | B, C | 2.1 | The approach to risk and change are often directly linked to an organisation's culture. The other answer options relate either to external factors, or to internal factors that are not directly influenced by culture. |
| 13 | C | 1.1 | Matrix structures are commonly used within project environments to establish temporary reporting lines whilst the project is being undertaken. This ensures that there are clear roles and responsibilities as well as commitment from each area of the business required for the project. It also ensures there is a clear reporting line to the project manager, with individuals still reporting into their line manager for their day-to-day duties. |
| 14 | D | 1.3 | In order to understand how best to improve performance, it is important to have an understanding of how each team member is currently performing in order to identify improvements. |
| 15 | B | 6.1 | OOP uses classes to structure code and group objects together. The other statements are true of either functional or procedural languages. |
| 16 | A, C | 6.1 | Python and R are two of the most widely used languages in data analysis. |
| 17 | C, E | 7.4 | Key principles of agile development are incremental and iterative delivery, and the flexibility to respond to changing requirements. |

| | | | |
|----|------|------------|---|
| 18 | B | 7.2 7.3 | In this scenario, it's important to prioritise preparing an assessment of the impact of the additional stakeholder requirements on the project. This includes evaluating the effort required, the resources needed, the timeline implications, and any associated risks. This assessment will provide senior management with essential information to make informed decisions about allocating additional resources and adjusting the project plan accordingly. |
| 19 | C | 7.5 | During the analysis stage of the systems development lifecycle, requirements are gathered in order to understand the needs and objectives of stakeholders. This stage involves conducting interviews, surveys, and workshops to identify user requirements, business processes, and system functionalities. The main goal is to define the scope of the project, document requirements, and establish a foundation for the subsequent stages of the SDLC. |
| 20 | B, C | 1.5 | Cloud technology can enable individuals and teams to more easily share and work together on files due to a centralised storage approach. This also reduces the risk of files being lost when stored locally on single devices that may be damaged, lost or stolen. |
| 21 | A, E | 1.2 | An organisation's mission and vision should clearly set out what the purpose and intention of the organisation and often forms the basis of an organisation's business plan. Its five year plan would also provide in-depth detail relating to the strategy it is taking in order to achieve its objectives. |
| 22 | A | 1.3 | This KPI is specific, measurable, and directly related to the objective of increasing brand visibility and recognition through online marketing channels. It provides a clear target for social media engagement, which is a key aspect of enhancing brand visibility and recognition among the target audience. The other answers are either not specific, measurable metrics, or do not directly relate to the company's objective. |
| 23 | B | 1.1 | A public limited company can offer its shares to the general public via a stock exchange. |

| | | | |
|----|------|-----|--|
| 24 | C | 2.2 | As a first step, it's essential to establish a clear understanding of the organisation's requirements for the software. This involves aligning with stakeholders to define their objectives and expectations for the software solution. By confirming the organisation's requirements upfront, it provides a solid foundation for evaluating available options, presenting recommendations, and making informed decisions about software selection and implementation. |
| 25 | B, C | 1.5 | Before implementing any Machine Learning solutions, it is essential that an organisation understands specifically what data is needed for their purposes (i.e. which data sources, what data is actually relevant) to ensure that the output given by the software delivers the insight needed. All organisations should have clearly defined processes in place for generating/gathering, storing, using, archiving and deleting data. They should not be reliant on having one expert to use the software, they should ensure the expertise is shared among multiple staff. They should also understand the long-term costs associated with investing in any new solution. |
| 26 | C, E | 3.7 | Loss of data can severely disrupt an organisation and impact its customers. The majority of organisations are constantly generating lots of data types of data essential to its daily operations. It is critical a robust process is in place for backing up data so data can be restored in the event of cyber attack or server failure. This will also encourage a greater level of trust in the organisation and its activities from both internal and external customers. |
| 27 | D | 3.3 | Informing the compliance team or designated security incident response team within the organisation is the first crucial step in managing a potential breach. These teams are trained to assess and respond to security incidents promptly and effectively. By alerting them immediately, they can initiate the necessary steps to investigate the situation, contain the breach, and mitigate any potential risks or damages. |

| | | | |
|----|------|------------|---|
| 28 | A, C | 3.4 | <p>By regularly maintaining systems, organisations can reduce the risk of exploitation by cyber threats and ensure that their infrastructure remains resilient against evolving security threats.</p> <p>By investing in employee training, organisations can empower their workforce to play an active role in safeguarding company data and assets.</p> |
| 29 | B, D | 3.5 | <p>A sudden increase in incoming emails from external parties is an indicator of phishing.</p> <p>Unannounced changes to files or file structures could indicate a data breach or malware attack.</p> |
| 30 | A | 3.3 3.6 | <p>As per the organisation's IT Incident Response procedure, interruptions to operations should be expected. Although a threat may have financial consequences for an organisation (depending on its severity) it is not to say a delay in reporting the threat would ensure significant financial loss – although all staff should be encouraged to report a suspected threat as soon as possible to reduce the possibility of any harm being caused.</p> |
| 31 | A, D | 4.8 | <p>Stock control software enables demand forecasting by showing historical data relating to the amount of materials purchased, which can be reconciled with the number of treatments carried out. Accurately understanding the cost of materials helps determine the price to charge customers.</p> |
| 32 | C | 4.3 | <p>File servers are used to store and manage various types of files. Implementing a secure file server with access controls and encryption can help protect sensitive patient data from unauthorised access or disclosure.</p> |
| 33 | B, C | 1.5 4.6 | <p>Storing client and appointment data in a cloud platform eliminates the need to duplicate data between the main site and branch site. Instead of managing multiple copies of the same data across different servers or locations, the cloud platform serves as a centralised repository accessible to both sites.</p> <p>Additionally, using a cloud platform offers features such as file sharing, version control, and real-time editing, facilitating collaboration between team members across different locations.</p> |

| | | | |
|----|---------|------------|--|
| 34 | B | 4.4 | A firewall is a device used to monitor and prevent unauthorised data traffic, and can prevent or limit access to certain websites based on rules set by an administrator. In this situation it is most likely that it is the firewall blocking the HR portal website as the issues logged relate specifically to the access of this website rather than to a wider network issue i.e. it is only this website that appears to be blocked. |
| 35 | D | 7.1 | The Power/Interest Matrix helps to categorise and prioritise stakeholders based on their level of influence and interest in a project, as well as their potential level of support for, or resistance against, a project. |
| 36 | B | 5.2 5.4 | The correct answer not only offers the most practical way of creating data by asking the adopters to input their own preferences, it is also the most ethical as the users can be asked for their permission for the shelter to use/ store their data as required. |
| 37 | A, B, D | 5.1 | Structured data is highly organised and formatted, making it easier to process and analyse, while unstructured data lacks a predefined structure. Examples of structured data include breed, age and activity level. |
| 38 | C, D | 6.2 | Using standard naming conventions and commenting on code (so that it is easier for other developers to understand your process) are both examples of good practice. Making all code as concise as possible makes it hard to understand for other coders, and so harder to maintain. Copying and pasting code to reuse helpful sections proliferates copy/paste errors and makes maintenance harder. Always using open source code wherever possible to ensure portability - licensing restrictions may mean this isn't appropriate, and portability wouldn't necessarily be a feature of doing this anyway. |
| 39 | C, D | 5.3 | Gathering and analysing data from potential adopters can provide valuable insights into the preferences, behaviors, and needs of adopters, which can inform strategic decision-making and planning processes. By analysing data collected from potential adopters, the animal shelter can identify trends in adoption |

| | | | |
|----|---|-----|---|
| | | | <p>preferences, such as popular breeds, preferred characteristics, or adoption patterns over time. This enables the shelter to predict future trends and adjust their adoption strategies accordingly.</p> <p>The other options could contravene data protection laws and/or ethical practices associated with personal data.</p> |
| 40 | C | 6.4 | <p>Conditionals involve using conditions to determine the behaviour or outcome of a system. In this case, the app uses filters based on specific criteria (such as species, breeds, or characteristics) to display only the animals that match the preferences of prospective adopters.</p> |