

Question 1  
Complete  
Mark 2 out of 2

Match the security compliance codes to their respective descriptions.

Controls how your personal information is used by organisations, businesses or the government in the UK.	DPA 2018
Imposes data privacy obligations to organisations targeting or collecting data related to people in the EU.	GDPR
Provides requirements for the information security management system to manage the security of assets such as financial information.	ISO27001
Sets technical and operational requirements for organisations accepting or processing payment transactions.	PCI-DSS
Provides practical recommendations for addressing security concerns relating to deploying applications on containers.	NIST SP 800-190

Question 2  
Complete  
Mark 3 out of 3

It is generally an acceptable practice to add easter eggs or special function in code as a "signature".

Select one:

- ☐ True
- ☒ False

Question 3  
Complete  
Mark 0 out of 1

Take a look at the following email sent out to you.

*Forgotten password request*

*Dear John Doe,*

*We have processed your request, and are sending your password to the registered email in your account.*

*Your password is:*

*hunter2*

*Please do not share your password with anyone.*

*Kind Regards,*

*IT Service Desk*

*REF: AMLKS123123*

*How would you re-design the password handling processes to be more secure.*

- ☒ a. Send an encrypted form of the password in the email to the user
- ☐ b. Add "salt" to the password
- ☐ c. Add "pepper" to the password
- ☐ d. Enforce sufficient password length or complexity
- ☒ e. Store the hash of password instead of the password itself
- ☒ f. Get the user to reset their password if they have forgotten it

Question 4  
Complete  
Mark 3 out of 3

Address Resolution Protocol (ARP) translates an IP address to a domain name.

Select one:

- ☐ True
- ☒ False

Question 5  
Complete  
Mark 2 out of 2

Which of the following is/are true in a scenario where asymmetric keys are used for digital signatures? (e.g. documents, emails).

- ☐ a. The verifier uses the user's private key for verification
- ☐ b. The Certificate Authority sends a certificate to the receiver via email when sending digitally signed content
- ☐ c. The signer uses a public key for encryption
- ☒ d. The signer uses a private key for signing
- ☒ e. The verifier uses the user's public key for verification

Question 6

Complete

Mark 2 out of 2

Which of the following attack(s) occur when a malicious person makes a user send a request containing malicious input to a server and the server then echoes the input back to client?

- ☐ a. Brute forcing
- ☐ b. Persistent XSS
- ☐ c. SQL Injection
- ☐ d. Insecure deserialisation
- ☒ e. Reflected XSS

Question 7

Complete

Mark 3 out of 3

Once you create a Pull Request and it hasn't been merged yet, you can still make follow-up commits to the Pull Request.

Select one:

- ☒ True
- ☐ False

Question 8

Complete

Mark 1 out of 2

Which of the following is correct about configuration drift?

- ☐ a. It means there is a divergent between infrastructure and original configuration
- ☐ b. Configuration drift facilitates disaster recovery from failure
- ☐ c. Immutable infrastructure can be a measure against configuration drift
- ☒ d. Using infrastructure as code and images to deploy VMs in a cloud environment is an example of implementation to prevent configuration drift
- ☐ e. Dealing with configuration drift means consistent infrastructure in development, test and staging environments

Question 9

Complete

Mark 2 out of 2

What are the benefits of a microservice architecture?

- ☐ a. It results in less service-to-service communications meaning improved network latency
- ☒ b. It allows different developers to use polyglot programming languages to create services
- ☐ c. It ensures the architecture is tightly coupled
- ☐ d. It makes the whole architecture less complex
- ☒ e. It allows failures and faults to be isolated instead of disrupting the whole implementation further down

Question 10  
Complete  
Mark 3 out of 3

The .md extension in README.md file in git repositories refers to

Answer: markdown

Question 11  
Complete  
Mark 3 out of 3

Input validation is a method used to defend against malicious inputs which are provided by users in input fields.

Select one:

- ☒ True  
☐ False

Question 12  
Complete  
Mark 2 out of 2

You attempted to merge a git branch called fix-2 to your current branch and observe the following merge conflict additions to your README.md file.

```
<<<<<< HEAD
Please read the file content.
=====
Please read the file.
>>>>>> fix-2
```

- ☐ a. You can accept the content from your branch by deleting line 4 and line 5, and continuing with the merge process
- ☐ b. You can accept the content from fix-2 branch by deleting line 2 and continuing with the merge process
- ☒ c. <<<<<< section (line 2) shows what content is in your current branch
- ☒ d. >>>>>> section (line 4) shows what content is in the merging branch
- ☐ e. Line 3 ( ===== ) needs to be retained when fixing the merge conflict

Question 13  
Complete  
Mark 1 out of 1

Which of the following is/are true regarding Zero Knowledge Proofs (ZKP)?

- ☐ a. Zero Knowledge Proof protocols typically require low computational power
- ☒ b. It allows prover to convince verifier(s) of prover's knowledge without revealing the actual knowledge such as private keys
- ☐ c. There is a possibility of data loss ultimately as Zero Knowledge Proof only verifies knowledge of data between parties and not sharing of the data itself
- ☒ d. A use case for Zero Knowledge Proof is to prove your digital identity without handing over your personal information such as passport number
- ☐ e. It allows prover to convince verifier(s) of prover's knowledge with absolute certainty

Question 14  
Complete  
Mark 3 out of 3

It is a generally good practice to require Multi Factor Authentication to carry out privileged activities such as changing your password, and deleting a user.

Select one:

- ☒ True  
☐ False

Question 15  
Not answered  
Marked out of 2

Why should you define and publish a responsible disclosure policy for your applications or projects?

- ☐ a. It helps ensure vulnerabilities are kept private while they're being fixed
- ☐ b. It encourages users or researchers to report vulnerabilities to the internal team instead of making them public in the first instance
- ☐ c. Responsible disclosure typically doesn't give bounties to attackers, saving the organisation some cost
- ☐ d. It puts more pressure on the team to fix vulnerabilities in comparison to full disclosure
- ☐ e. It allows vulnerabilities to get reported to the right contact

Question 16  
Complete  
Mark 2 out of 2

Which of the following can be used to retrieve changes from remote git repositories to your local repository?

- ☐ a. git receive remote
- ☒ b. Git fetch, followed by git merge
- ☐ c. git add remote
- ☐ d. git checkout remote
- ☒ e. git pull

Question 17  
Complete  
Mark 0 out of 3

Output encoding involves encrypting outputs into base64 encoding format.

Select one:

- ☒ True
- ☐ False

Question 18  
Complete  
Mark 0 out of 1

Which of the following steps are necessary to remove a committed file from the remote git source code repository history using git-filter? Assume a release is published with the file to be removed.

- ☒ a. Run `git filter-branch --force --index-filter "git rm --cached --ignore-unmatch PATH-TO-YOUR-FILE" --prune-empty --tag-name-filter cat -- --all`
- ☐ b. Force all your local objects to be dereferenced and garbage collected
- ☐ c. Run `git push origin --force --tags`
- ☐ d. Run `git push origin --force --all`
- ☐ e. Ask all those with local copies to merge the old branch back to a new filter branch

Question 20  
Complete  
Mark 3 out of 3

The principle of "Least privilege" aims to provide the privileges that users don't need at present, but may do so in the future.

Select one:

- ☐ True
- ☒ False

Question 21  
Complete  
Mark 3 out of 3

A Distributed Denial of Service (DDoS) attack sends massive amounts of traffic to a server using multiple computers or machines, such as IoT devices.

Select one:

- ☒ True
- ☐ False

Question 22  
Complete  
Mark 3 out of 3

Which of the following command(s) can be used to create a new git branch?

- ☐ a. git branch new mynewbranch
- ☐ b. git add remote mynewbranch
- ☐ c. git create branch mynewbranch
- ☒ d. git branch mynewbranch
- ☒ e. git checkout -b mynewbranch

Question 23  
Complete  
Mark 2 out of 2

Take a look at the following email sent out to you. What would a typical recipient of the email be concerned about in terms of security? Please click all that apply.

Forgotten password request

Dear John Doe,

We have processed your request, and are sending your password to the registered email in your account.

Your password is:

hunter2

Please do not share your password with anyone.

Kind Regards,

IT Service Desk

REF: AMLKS123123

- ☐ a. Name of service desk member isn't provided
- ☒ b. Network admins in the company could potentially see your password
- ☒ c. Your email service provider could potentially see your password
- ☐ d. Service desk member can see your password
- ☐ e. The email looks suspicious as it doesn't contain images and logos
- ☒ f. Password length allowed is quite small
- ☒ g. Password does not enforce use of special characters

Question 24  
Complete  
Mark 1 out of 2

Why should you have multiple backups of data?

- ☐ a. The process of backup doesn't consume compute resource
- ☐ b. It allows you to split your data in devices as a measure against stealing the full version of the data.
- ☒ c. It allows you to recover from data corruption
- ☐ d. Storage costs are cheaper than they used to be in the past
- ☒ e. It's a measure against ransomware

Question 25  
Complete  
Mark 1 out of 2

Which of the following are bad examples of error messages to display when the wrong password is inputted into login pages?

Select all that apply.

- ☐ a. Incorrect password provided. Please try again.
- ☒ b. Invalid User ID used. Please try again.
- ☐ c. The username doesn't match the password. Please try again.
- ☐ d. Username or password was incorrect. Please try again.
- ☒ e. Incorrect password provided. The account has been disabled.
- ☐ f. Old password was used. Please try again.