

External assessment 2022

Multiple choice question book

Digital Solutions

General instruction

- Work in this book will not be marked.

Section 1

QUESTION 1

Hashing increases security for data

- (A) storage.
- (B) encryption.
- (C) compression.
- (D) authentication.

QUESTION 2

Which encryption method is an example of asymmetric encryption?

- (A) DES
- (B) RSA
- (C) Blowfish
- (D) Triple DES

QUESTION 3

Analyse the wireframe to determine which principle of visual communication has been applied.

The wireframe shows a 'Create account' dialog box. It features a title bar with the text 'Create account' and a close button (X). The main content area contains four text input fields stacked vertically, labeled 'Email address', 'Username', 'Password', and 'Confirm password'. At the bottom right of the dialog, there are two buttons: 'Submit' and 'Cancel'.

- (A) proximity
- (B) hierarchy
- (C) alignment
- (D) proportion

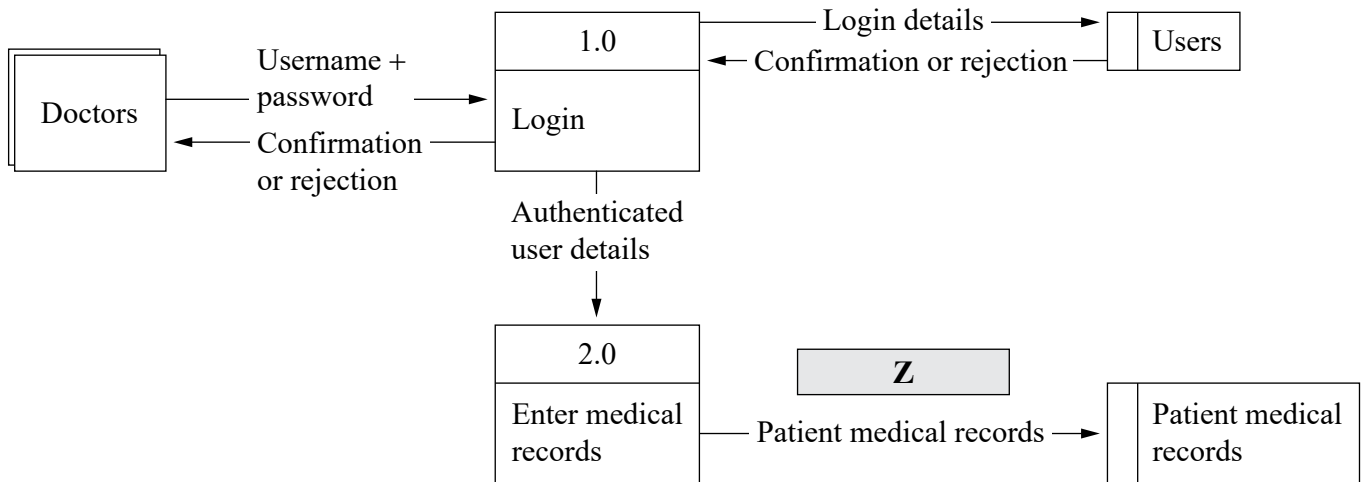
QUESTION 4

A librarian uses a digital system to manage and monitor book borrowing. A friend of the librarian is desperate to borrow a book that is unavailable and asks the librarian for the details of the customer who has borrowed the book. Which Australian Privacy Principle would be breached if the librarian provided these details to their friend?

- (A) APP 2: Anonymity and pseudonymity
- (B) APP 4: Dealing with unsolicited personal information
- (C) APP 6: Use or disclosure of personal information
- (D) APP 13: Correction of personal information

QUESTION 5

Analyse the flow of data to identify the appropriate data security strategy to be performed at Z.



- (A) authentication
- (B) checksum
- (C) hashing
- (D) encryption

QUESTION 6

Complete the Caesar encryption algorithm with the correct statement at line 5.

```
0  BEGIN
1      INPUT userText AS STRING
2      INPUT userShift AS INTEGER
3
4      FOR each character IN userText
5
6          result = result + newCharacter
7      ENDFOR
8      OUTPUT result
9  END
```

- (A) `newCharacter = userText + userShift`
- (B) `newCharacter = character + userShift`
- (C) `newCharacter = character - userShift`
- (D) `newCharacter = character + userShift MOD 26`

QUESTION 7

Which data format supports structures including strings, arrays, numbers and Booleans in UTF-8 encoding?

- (A) SQL
- (B) XML
- (C) JSON
- (D) HTML

QUESTION 8

Analyse the user interface to determine a visible risk that affects the data security of the webpage owner.

The screenshot shows a web browser window with the address bar displaying `http://www.example.com`. Below the address bar, there is a section titled "Downloads" with a list of files: `Filename.docx`, `Filename.pdf`, `Filename.exe`, `Filename.app`, `Filename.mov`, and `Filename.mp4`. The `Filename.docx` and `Filename.app` files are selected with radio buttons. To the right of the download list is a pop-up advertisement window titled "Pop-up advertisement" with a close button (X). The advertisement features a smiling face icon and a button labeled "CLICK HERE". Below the download list is a form labeled "Email address*" with an empty input field. At the bottom right of the page is a button labeled "Download".

- (A) The user interface has pop-up advertising.
- (B) The user interface hosts several documents for download.
- (C) The user interface requires user input of personal information.
- (D) The user interface uses the HTTP network transmission protocol.

QUESTION 9

Which algorithmic statement determines the value of y between 10 and 50 inclusive?

- (A) **IF** $10 > y$ **OR** $y > 50$
- (B) **IF** $10 > y$ **AND** $y < 50$
- (C) **IF** $y \geq 10$ **OR** $y \leq 50$
- (D) **IF** $y \geq 10$ **AND** $y \leq 50$

QUESTION 10

Desk check the algorithm to determine its output.

BEGIN

SET X = 6

SET Y = 12

WHILE (X < Y)

INCREMENT X

Y = **PROCESS1** (X, Y)

ENDWHILE

OUTPUT Y

END

BEGIN PROCESS1 (A, B)

CALCULATE C = (B - A) × 2

RETURN C

END PROCESS1

The output value is

- (A) -10
- (B) 4
- (C) 8
- (D) 10



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