

- 4 A simple symmetric encryption system is used to encrypt messages. Each letter of the alphabet is substituted by another letter.

Plain text

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Cypher text

v	p	n	a	q	b	r	u	z	s	c	o	y	k	w	f	x	i	e	m	d	j	t	l	h	g
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

- (a) Convert the following plain text to cypher text.

Plain text: **d a t a s e c u r i t y**

Cypher text:[2]

- (b) A new cypher text is created by shifting each letter of the alphabet **five** places to the right.

Show the new cypher text below.

Plain text

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

New cypher text

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

[2]

- (c) State, giving a reason, which cypher text would be more secure.

.....

[2]

- 5 Give the meaning of the following terms.

HTML

.....

http

.....

https

.....

[3]

10 There are **six** descriptions in the table below.

Complete the table below by writing the correct storage device or media in the box next to each description.

Description	Storage device or media
Non-volatile memory that can only be read from and not written to.	
Optical storage media that allows very high storage capacity by using blue/violet laser technology.	
Volatile memory that stores data, programs and the parts of the operating system that are currently in use.	
Optical storage media that uses a single spiral track and uses dual layer technology, allowing high data storage capacity.	
Device that stores data by controlling the movement of electrons within a microchip; there are no moving parts.	
Optical storage media that uses concentric tracks allowing writing and reading to take place at the same time.	

[6]