

CTEC IT Summer Taster Work – Find out and define the following technical words. Answer in your own words. Do not copy and paste. Include applicable images for visual purposes.

Types of computer system. Find out about the following:

Desktop/server

Tablet/hybrid

Mainframe

Quantum Computers

Network Hardware

Hub

Switch

Router

Modem

Wireless access point

Units of measurement, Explain the following measurements and what data they represent

Bit, nibble, byte

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Metric (kilo, mega, giga, tera, peta)	
Binary (kibi, mebi, gibi, tebi, pebi)	
Decimal	
Hexadecimal	
How do you convert between binary, decimal and hexadecimal? Put in the equations to the right here...	
Find out what the following protocols stand for. What is a protocol?	
IP	
TCP	
UDP	
SMTP	
FTP	
HTTP	

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SNMP	
ICMP	
POP	

Stretch and Challenge:

Have a go at answering the following exam style questions to test your knowledge. You may need to do some research to find a suitable answer:

Which of the following **best** describes the purpose of a processor component in a computer?

(a) To control user access to the data on the computer.

(b) To manage the main functions and operations of the computer.

(c) To display calculations.

(d) To store data in the computer.

[1]

How do quantum computer systems differ from traditional computer systems?

(a) Quantum computers do not rely on binary logic.

(b) Quantum computers do not require secondary storage.

(c) Quantum computers use Open Source Operating Systems.

(d) Quantum computers utilise anti-static to minimise energy consumption.

[1]

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How many bits are included in a nibble?

(a) 1

(b) 2

(c) 4

(d) 8

[1]

Which of the following is the **most** likely cause of a slow running application on a computer?

(a) Insufficient Active Directory capacity.

(b) Insufficient ports on the motherboard.

(c) Insufficient ROM capacity.

(d) Insufficient RAM capacity.

[1]

Which of the following is a weakness of using a firewall to protect a website?

(a) Does not prevent an authorised user from using the system maliciously.

(b) The firewall restricts access only to those who have previously been on the website.

(c) The firewall will only allow data to flow from the viewer's machine to the website.

(d) The firewall will only allow data to flow from the website to the viewer's machine.

[1]