Computer Systems Unit Revision Notes & Questions

Name	

Unit Checklist

Topic	Notes	Rating(1-5) 1 - Confident
Data Representation	Binary > Decimal Conversions Decimal > Binary Conversions Floating Point Numbers ASCII & Extended ASCII Vector Graphics Bit mapped Graphics	
Computer Structure	Processor (Registers, ALU, Control Unit) Memory Locations Buses (Address, Data & Control Bus) Translator Programs	
Environmental Impact	Saving Energy by using: Monitor Settings Power Down Settings Standby Settings	
Security Precautions	Role of Firewalls Encryption	

KIND POSITIVE YOURSELF

Revision Questions

Data Representation

Binary Conversions

Q1 - Convert the following 2 numbers from 8 bit Binary to denary

a) 11011011

b) 00111110

Q2 – Convert the following 2 denary numbers to 8 bit binary numbers

a) 87

b) 198

Floating Point Representation

Q3 – Floating point representation is how real numbers are stored in the Computer System. Name the two parts that make up a floating point number & explain what each part stores

M _ _ _ _ _ _ _	
E _ _ _ _ _ _ _	

ASCII & Extended AsCII

Q4 – In terms of the number of bits per character what is the difference between ASCII & Extended ASCII?

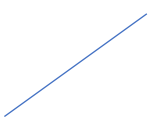
Q5 – How many bits of storage would be required to store the word "Belmont Academy" in ASCII & Extended ASCII?

Vector & Bit Mapped Graphics

Q6 – Identify each of the Vector objects below

a) 

b) 

c) 

d) 

	Q7 - Vector graphics are stored as objects and the attributes of each objects. Identify 3 attributes that have would be stored of the objects in Q6. Q8 – How are Bit mapped Graphics stored in the Computer System?

Computer Structure

Processor	Q9 – Name and describe each of the 3 parts of the CPU.
Memory Locations	Q10 – How does the CPU identify different storage locations in main memory?
Buses	Q11 – In terms of Computer Systems, What is a bus? Q12 – Name and describe each of the 3 buses.
Translator Programs	Q13 – What are translator programs used for? Q14 – Name the two types of translator program & explain the difference between them.

Name	Description

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Environmental Impact

Monitor Settings	Q14 – What settings can be changed in a monitor to reduce energy usage?
Power Down Settings	Q15 – What settings can be changed in a computer system with regards to powering down to reduce energy usage?

Standby Settings	Q16 – How can the use of standby settings reduce energy usage in a computer system?

Security Precautions	
Firewalls	Q17 – What is a firewall? Q18 – How does a firewall protect a computer system?
Encryption	Q19 -What is encryption? Q20 – What type of data would you want to be encrypted when it is sent over the internet? Q21 – How does encryption work?