OBHS Core Questions:

Subject: Computing
Year and Term: Year 11 Autum 1
Topic: Computer Legislation

Learn these questions to build a strong foundation of knowledge for this half-term. Ask family or friends to test you regularly, or practise on your own using the 'Look, Say, Cover, Write' method.

	Question	Answer
1.	What is meant by an Ethical issue?	Considering right and wrong, morality and power
2.	What is meant by a Legal issue?	How technology could be used illegally
3.	What is meant by a Cultural issue?	The impact on society and how we interact with one another
4.	What is meant by a Environmental issue?	How technology affects the world around us
5.	What is meant by a Privacy issue?	How peoples' data is used and shared
6.	Name three laws related to computing	Data Protection Act 2018, computer Misuse Act 1990, Copyright Designs and Patents Act 1988
7.	What is the purpose of the Data Protection Act 2018?	To ensure people's data is kept secure and up to date by anyone using that data
8.	What is purpose of the computer misuse Act?	Criminalises the use of technology to perform illegal actions, or cause harm to someone
9.	What is the purpose of the Copyright, Designs and Patent Act?	Allows people to maintain possession of their content (art, photos, music, ect.) online. Requires others to get permission to use their material.
10.	Name two types of software license	Proprietary and Open Source
11.	Which type of Software license requires payment?	Proprietary
12.	Which type of software license gives you access to the source code?	Open Source
13.	What are the benefits of Proprietary Software?	More widely tested, support provided, kept up to date, secure/trustworthy
14.	What are the benefits of Open Source Software?	Free, can be modified to your exact needs

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Topic: Producing Robust Programs

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	Question	Answer
1.	What are two factors to consider when designing a programming?	Anticipating Misuse, Authentication
2.	What is mean by Misuse?	Using the program for something other than what it was intended for
3.	What is meant by Authentication?	Ensuring data is only accessible to the person that owns it
4.	What is Input Validation?	Ensuring that any data entered into the program is of the kind that is expected (EG: only a number being accepted for an age)
5.	What is meant by program Maintainability?	How easy it is to read/understand the code you've written
6.	Give four ways of improving program maintainability	Subroutines, Naming Conventions, Indentation, Commenting
7.	What is a Subroutine?	A reusable block of code that performs a specific task
8.	What is a Naming Convention?	Ensuring names are useful (EG: a variable holding a name being called "name")
9.	What is Indentation?	Gaps at the beginning of a line of code to show when it belongs with certain structures (EG if statements, loops, functions ect.)
10.	What is Commenting?	Adding text to your code describing how it functions
11.	Why do we test programs?	To ensure they function as expected
12.	What is Iterative testing?	Performing tests throughout the development process
13.	What is final testing?	Performing tests when the program has been completed
14.	What is a Syntax error?	The code written is incorrect and the program will not run
15.	What is a Logic Error?	The program runs but give an unexpected outcome
16.	What are the 3 types of test data?	Normal, Boundary, Invalid/Erroneous
17.	What is Normal Data?	Data that the code should accept and give a correct outcome
18.	What is Boundary Data?	Data on the edge of what is valid (EG: Boundary data for a program accepting a number between 1 -100, both 1 and 100 would be boundary data)
19.	What is Invalid/Erroneous Data?	Data that the program should not accept

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Subject: Computing

Year and Term: Year 11 Autum 1

Topic: Searching and Sorting Algorithms

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	Question	Answer
1.	What are the two types of searching algorithm?	Linear, Binary
2.	How does a linear search work?	Check each item in the list until it finds the one it is looking for
3.	How does a binary search work?	Discards part of the list that the item cannot be in until the item is found
4.	What is required to perform a binary search?	The list must be in order
5.	What are the three types of sorting algorithms?	Bubble, Insertion, Merge
6.	How does a Bubble sort work?	Items next to each other are compared and swapped if one is bigger than the other. Each pass, the largest value "bubbles" to the end of the list.
7.	How doe an Insertion Sort work?	Values are inserted into the correct position from the unsorted end of the list into the sorted end
8.	How does a merge sort work?	A list is split until it is made up of individual pieces of data. The data is then merged back together, with the items in the correct order.