A Level Computer Science Y12 Exam Revision Timetable

Student Name:

We will be asking you to revise different topics from Unit 1 and Unit 2. You MUST make revision notes. Remember revision must mean you make your own notes so choose your preferred technique well. Do not just read your notes, this will only help you a remember for a short time and you will not remember everything. It is always best to do something with your notes, rewriting them or testing yourself will help much more.

Exam

You will have 2 exam papers to do. They will each be 1 hour 30 minutes in length and will take place in your Computer Science classroom.

Paper 1 (Mr Hamer) – Monday 6th June
Paper 2 (Miss Allgar) – Monday 13th June

Resources

- eTextbook. You can access an online version of the Textbook through Dynamic Learning. This includes access on any Smart Phone, (paper book if given).
- Showbie has all the work you have done in class for this unit with lots of links and information. This includes a link to Dynamic Learning.
- Diagnostic Questions Online, Seneca Assignments, Craig n Dave Online Videos (YouTube), Isaac Computing web site.

What to revise – a suggested guide	**Revised & Tested?**	**Any Problems?**
Week 1 wb 09/05 **1.1 The characteristics of contemporary processors, input, output and storage devices (Mr Hamer)** 1.1.1Structure and function of the processor • ALU, CU, Registers, Buses, data, address and control and how they relate to assembly language. FDE Cycle and its effects on the registers. CPU performance and architectures. 1.1.2 Types of Processors CISC and RSIC and Multicore and Parallel systems. 1.1.3 Input, output and Storage • Different types of devices, Magnetic, flash and optical storage, RAM and ROM, Virtual Storage **2.1 Elements of computational thinking (Miss Allgar)** 2.1.1 Thinking abstractly • The nature of abstraction, the need for abstraction, the differences between an abstraction and reality, Devise an abstract model for a variety of situations. 2.1.2 Thinking ahead • Identify the inputs and outputs, determine the preconditions for devising a solution to a problem, The nature, benefits and drawbacks of caching, The need for reusable program components.		
Week 2 wb 16/05 **1.2 Software and software development (Mr Hamer)** 1.2.1 Systems Software • Operating Systems, Memory Management, Interrupts, Scheduling, BIOS, Device Drivers, Virtual Machines. 1.2.4 Types of Programming Language • Need for and characteristics of a variety of programming paradigms. Procedural, Assembly. **Unit 2 revision on the next page.**		

2.1 Elements of computational thinking (Miss Allgar) 2.1.3 Thinking procedurally Identify the components of a problem and its solution. Determine the order of the steps and sub-procedures needed to solve a problem. 2.1.4 Thinking logically • Identify the points in a solution where a decision has to be taken. Determine the logical conditions that affect the outcome of a decision. Determine how decisions affect flow through a program. 2.1.5 Thinking concurrently • Determine the parts of a problem that can be tackled at the same time. Outline the benefits and trade-offs that might result from concurrent processing in a particular situation.		
Week 3 wb 23/05 **1.4 Data types, data structures and algorithms (Mr Hamer)** 1.4.1 Data Types • Primitive data types, Character Sets. Representing Positive and Negative numbers in binary, Addition and subtraction of binary, Positive hexadecimal. Converting positive integers. Representation and normalisation of floating-point numbers. 1.4.2 Data Structures • Arrays, records, lists, tuples. The following structures to store data: stack, queue. 1.4.3 Boolean Algebra • Define problems using Boolean logic. • Manipulate Boolean expressions, Karnaugh maps. • Use logic gate diagrams and truth tables. **2.2 Problem solving and programming (Miss Allgar)** 2.2.1 Programming techniques • Programming constructs, variables, modularity, functions and procedures, Use of IDE, use of object-oriented techniques		
Week 4 wb 30/05 (Half Term Holiday) **1.3 Exchanging data (Mr Hamer)** 1.3.2 Networks • Characteristics of networks and the importance of protocols and standards. • Network security and threats, use of firewalls, proxies and encryption. • Network hardware. • Client-server and peer to peer. **2.2 Problem solving and programming (Miss Allgar)** 2.2.1 Programming techniques • Programming constructs, variables, modularity, functions and procedures, Use of IDE, use of object-oriented techniques		
Week 5 wb 06/06 **Unit 1 Exam on Monday 6th June in lesson (Mr Hamer)** **2.3 Algorithms (a, e and f only) (Miss Allgar)** 2.3.1 Algorithms • Analysis and design of algorithms for a given situation. Stacks & Queues. Bubble Sort, insertion sort, merge sort, quick sort, binary search and linear search.		
Week 6 wb 13/06 **Unit 2 Exam on Monday 13th June in lesson (Miss Allgar)**		