



Learning Journey



A Level in Computer Science (H446)

2.1 Elements of computational thinking

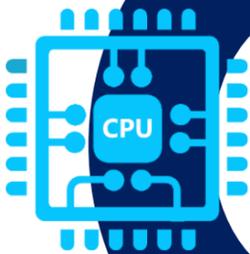


NEA
3.4 Evaluation
(20 marks)

- 2.1.1 Thinking abstractly
- 2.1.2 Thinking ahead
- 2.1.3 Thinking procedurally
- 2.1.4 Thinking logically
- 2.1.5 Thinking concurrently

- 1.5.1 Computing related legislation
- 1.5.2 Moral and ethical Issues

1.5 Legal, moral, cultural and ethical issues



- 1.5.1 – Systems software
- 1.5.2 Utility software

1.5 – Systems Software

- Analysis of design of algorithms
- Searching algorithms
- Bubble sort and Insertions sort
- Merge sort and Quicksort
- Graph traversal
- Optimisation

2.3 – Algorithms

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NEA
3.3 Developing
the solution
(25 marks)

- 1.4.1 Data Types
- 1.4.2 Data Structures
- 1.4.3 Boolean Algebra

1.4 Data types, data structures and algorithms



- 1.3.1 Compression, Encryption and Hashing
- 1.3.2 Databases
- 1.3.3 Networks
- 1.3.4 Web Technologies

1.3 Exchanging data

NEA
3.2 Design of the
solution
(15 marks)

2.3 Data Structures

- Programming basics
- Selection
- Iteration
- Subroutines
- Recursion
- Object orientated programming

NEA
3.1. Analysis of
the problem
(10 marks)

- Array, Tuples and records
- Queues
- List and linked lists
- Stacks
- Hash tables
- Graphs
- Trees

2.2 Programming techniques

1.2 Software and software development

- 1.1.1 Structure and function of the processor
- 1.1.2 Types of processor
- 1.1.3 Input, output and storage

- 1.2.2 Applications Generation
- 1.2.3 Software Development
- 1.2.4 Types of Programming Language

1.1 The characteristics of contemporary processors, input, output and storage devices

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Paper 1: Computer Systems 40%
 Paper 2: Algorithms and Programming 40%
 NEA – Programming Project 20%