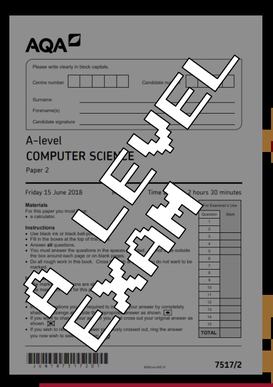
A LEVEL COMPUTER SCIENCE

LEARNING JOURNEY @RWBA



PAPER 1 (PROGRAMMING EXAM) PRE-RELEASE PREPARATION

NON-EXAM ASSESSMENT (NEA) IMPLEMENTATION

FUNDAMENTALS OF COMPUTER ORGANISATION & ARCHITECTURE

HARDWARE

PROCESSOR COMPONENTS

STORED PROGRAM CONCEPT

INSTRUCTION SETS

ADDRESSING MODES

EXTERNAL HARDWARE

NEA TESTING

MORAL, ETHICAL, LEGAL AND CULTURAL ISSUES

NEA EVALUATION

CONSEQUENCES OF USES OF COMPUTING

Y13

DESIGN

BIG DATA

STRUCTURED QUERY LANGUAGE (SQL)

ANALYSIS

RELATIONAL DATABASES

NON-EXAM ASSESSMENT (NEA)

FUNDAMENTALS OF DATABASES

VISUAL PROGRAMMING

FUNDAMENTALS OF COMMUNICATION & NETWORKING

FUNDAMENTALS OF COMPUTER SYSTEMS

COMMS BASICS

HARDWARE & SOFTWARE

NETWORKS

CLASSIFICATION OF LANGUAGES

THE INTERNET

BOOLEAN ALGEBRA

INTERNET SECURITY

LOGIC GATES

TCP/IP

NUMBER SYSTEMS

INTERNET SECURITY

BINARY

CLIENT-SERVER MODEL

CODING SYSTEMS

ENCRYPTION

FUNDAMENTALS OF DATA REPRESENTATION

FUNCTIONAL PROGRAMMING

SORTING ALGORITHMS

REVERSE POLISH NOTATION

SEARCH ALGORITHMS

DIJKSTRA'S SHORTEST PATH

GRAPH & TREE TRAVERSAL

FUNDAMENTALS OF ALGORITHMS

VECTORS

HASH TABLES AND DICTIONARIES

GRAPHS AND TREES

QUEUES & STACKS

STRUCTURES & ABSTRACT DATA TYPES

FUNDAMENTALS OF DATA STRUCTURES

Y12

FUNDAMENTALS OF COMPUTATIONAL THINKING

ABSTRACTION & AUTOMATION

PROGRAMMING BASICS

FINITE STATE MACHINES

BASIC OPERATIONS

TURING MACHINES

SUBROUTINES

REGULAR & CONTEXT-FREE LANGUAGES

LOCAL AND GLOBAL VARIABLES

MATHS FOR REGEX

STRUCTURED PROGRAMMING TECHNIQUES

BIG O NOTATION

OBJECT ORIENTED PROGRAMMING

FUNDAMENTALS OF PROGRAMMING

THERE IS NO REQUIREMENT TO HAVE STUDIED GCSE COMPUTER SCIENCE