**Year 10 PPE2 Computer Science- Revision Topics**

**Paper 1: 75 marks- Written paper**

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| Course introduction | Binary | Unsigned integers | Binary arithmetic | Two’s   complement 1 |
| Two’s   complement 2 | Logical binary shifts | Arithmetic binary shifts | Hexadecimal | ASCII |
| Stored program concept | Fetch-decode-  execute 1 | Fetch-decode-  execute 2 | Secondary   storage 1 | Secondary   storage 2 |
| Operating system | OS: File management | OS: Process management | OS: Peripheral & user management | Utility software |
| Malware & anti-malware | Hackers | Social engineering | Data level protection | Robust software |

**Paper 2: 75 marks- Completed in computer room**

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| Introduction to programming | Decomposition, algorithms | Data types, variables | Input and integer functions, debugging tools | Flowcharts |
| String manipulation, string methods | if, if else, relational operators | if elif else, readability | Boolean operators | Repetition (while) |
| One-dimensional lists | for loops, range function | Procedures | Functions | Subprograms |
| string.format() | Two-dimensional lists | Validation | Linear search   (one-dimensional) | Linear search   (two-dimensional) |
| Merge sort | Reading files | String processing | Writing files | Authentica-  tion |