**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  |