Practical 191 hrs

**Duty 1: Program in Q-Basic**

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| **S.No.** | **TASK** | **RELATED KNOWLEDGE** | **TIME (in hours)** | |
| **Theory** | **PRAC.** |
| 1 | Collect basic information for programming. | * Programming   + Introduction   + Types   + Function   + Importance * Computer Programming   + Introduction   + Types   + Function   + Importance * Programming language   + Introduction   + Types   (Language, Machine Language, Machine Levels, Middle Levels, High Levels.)   * + Function   + Importance * Problem solving with Computer * Translation (interpreter and compiler) * Procedural based language * Structure Language * Object-oriented language | 1 | 0 |
| 2. | Familiarize basic data types | * Data types   + Definition   + Basic   + User defined * Strings: (Variable-length, Fixed length) * Integer (Long integer, Short integer) * Precision (Single & double) | 1 | 3 |
| 3. | Familiarize constants | * Numeric constants (String and numeric) | 1 | 2 |
| 4. | Familiarize variables | * Constants   + Introduction   + Types   + Function   + Importance * Conversion of constants, * Reserved words, * User defined words | 1 | 2 |
| 5. | Familiarize the QBasic language elements | * Basic statements   + Introduction   + Function   + Importance * Different data type suffixes * Basic program line * Line numbers * Alphanumeric line labels * Basic line length | 1 | 3 |
| 6. | Familiarize the expressions/ operators | * Arithmetic, Relational, Logical, Functional and String operators * Hierarchy of operations | 1 | 2 |
| 7 | Write function and sub function statement |  | 1 | 2 |
| 8. | Develop Pseudo code |  | 1 | 2 |
| 9. | Draw flowchart | * Features, types, advantage, disadvantage of flow chart. * Flow chart symbols | 1 | 3 |
| 10. | Handle file | * Sequential file processing | 1 | 2 |
| 11. | Handle matrix | * Types of matrix * Matrix operation: Reading, printing, addition, subtraction, multiplication, transposing and inversion | 1 | 3 |
| 12. | Project work |  |  | 5 |
| **Sub-Total** | | | **11** | **29** |