

SYLLABUS FOR COMPUTER SCIENCE PAPER-I & II FOR MANIPUR CIVIL SERVICES COMBINED COMPETITIVE (MAIN) EXAMINATION

PAPER – I

1. Formal Languages and Automata Theory

Finite state machines, push down automata, Finite automata, context free language, context sensitive language, Turing machine, Decision question and undecided problems.

2. Computer Organisation

Functional components, CPU design, Memory organization and I/O organization.

3. Operating Systems.

Process mangagement, Memory management, File management I/O management.

4. Software Engineering

Life cycle model, function oriented design, object oriented design, User interface design, coding and Testing, software requirement, project management, software reliability and Maintenance.

PAPER – II

1. Date Structures

Continuous and Non-continuous data structures, Dynamic storage allocations, File organization techniques.

2. Principle of Programming Languages.

Various programming paradigms Syntax, Semantics, Block structure, Scoping, Binding, Object oriented programming, Functional programming, Logic and concurrent programming.

3. Database Management

Concept, Data independence, Diffierent models, Storage organization, query languages, Normal forms, Decomposition, Security, concurrency, Recovery.

4. Data communication and computer Networks

Basics of digital communication, Network architecture, physical layer, Medium access protocols, Data-link layer, Network layer, Transport layer and Application layer.