Computer Science

The Computer Science subject test would consist of multiple choice questions from the foundation courses of Computer Science. Topic-wise question distribution will be as follows:

- Discrete Structures (25 – 30)% A. Functions, relations and sets
    B. Basic logic
    C. Proof techniques
    D. Basics of counting
    E. Graphs and trees
    F. Discrete probability
- Programming and problem solving (25 – 30)%
    A. Programming Fundamentals: fundamental programming constructs, basic algorithms and problem solving, fundamental data structures, recursion, event-driven programming, object-oriented programming
    B. Programming Languages: features, paradigms, implementation techniques
- Algorithms and Complexity (20 – 25)%
    A. Advanced data structures and algorithms (including graph algorithms), algorithmic strategies, basic computability and complexity
    B. Automata theory and formal languages
- Systems (15 – 22)%
    A. Architecture: digital logic and digital systems, machine level representation of data, assembly level machine organization, interfacing and communication
    B. Operating Systems: operating system principles, concurrency, scheduling and dispatch, and memory management
    C. Networking
- Additional Topics (8 – 12)% A. Software Engineering
    B. Database systems
    C. Linear Algebra and calculus