Topicwise Tests

Test No.	Test Syllabus	No. of Ques.	Marks	Time	Activation Date
1	**Theory of Computation-1:** Regular expressions and finite automata, Context-free grammars and push-down automata	17	25	45 min	Active
2	**Theory of Computation-2:** Regular and context-free languages, Grammar, pumping lemma, Turing machines and undecidability.	17	25	45 min	
3	**Algorithms -1:** Sorting, Asymptotic worst case time and space complexity. Algorithm design techniques: greedy and divide-and-conquer and Searching.	17	25	45 min	
4	**Algorithms-2:** Hashing, Graph search, minimum spanning trees, shortest paths and dynamic programming.	17	25	45 min	
5	**Computer Organization and Architecture-1:** Instruction pipelining, Machine instructions and addressing modes and control unit.	17	25	45 min	
6	**Computer Organization and Architecture-2:** ALU, data-path, Memory hierarchy: cache, main memory, secondary storage and I/O interface (interrupt and DMA mode).	17	25	45 min	
7	**Databases-1:** Er-model. Relational model: relational algebra normalization and indexing (e.g., B and B+ trees).	17	25	45 min	Active
8	**Databases-2:** Tuple calculus, SQL, Integrity constraints, File organization, Transactions and concurrency control.	17	25	45 min	
9	**Engineering Mathematics-1:** Matrices, system of linear equations, eigenvalues and eigenvectors, Random variables. Uniform, normal, exponential, poisson and binomial distributions. Mean, median, mode and standard deviation.	17	25	45 min	
10	**Engineering Mathematics-2:** Limits, continuity and differentiability. Maxima and minima. Mean value theorem. Integration, determinants and LU decomposition, Conditional probability and Bayes theorem.	17	25	45 min	
11	**General Aptitude-1:** Numerical Ability: Numerical computation, numerical estimation, numerical reasoning and data interpretation.	17	25	45 min	
12	**General Aptitude-2:** Verbal Ability: English grammar, sentence completion, verbal analogies, word groups, instructions, critical reasoning and verbal deduction.	17	25	45 min	
13	**Operating System-1:** Memory management, virtual memory and Deadlock and File systems.	17	25	45 min	Active
14	**Operating System-2:** Processes, threads, inter-process communication, concurrency, synchronization and CPU scheduling.	17	25	45 min	
15	**Programming and Data Structures-1:** Programming in C, Arrays, stacks and queues, Recursion.	17	25	45 min	
16	**Programming and Data Structures-2:** Linked lists, trees, binary search trees, binary heaps and graphs	17	25	45 min	
17	**Computer Networks-1:** Concept of layering, LAN technologies and Ethernet bridging along with MAC protocols, Flow and error control techniques, switching, application layer protocols (DNS, SMTP, POP, FTP, HTTP, Email).	17	25	45 min	
18	**Computer Networks-2:** IPv4, routers and routing algorithms (distance vector, link state). TCP/UDP and sockets, congestion control, network layer protocol headers like ARP, DHCP, ICMP.	17	25	45 min	
19	**Digital Logic-1:** Boolean algebra, Combinational and Minimization	17	25	45 min	Active
20	**Digital Logic-2:** Sequential circuits, Number representations and computer arithmetic (fixed and floating point).	17	25	45 min	
21	**Discrete Mathematics-1:** Propositional and first order logic. Sets, relations, functions and counting	17	25	45 min	
22	**Discrete Mathematics-2:** Partial orders and lattices, groups, Graphs: connectivity, matching, coloring. Recurrence relations and generating functions.	17	25	45 min	
23	**Compiler Design-1:** Lexical analysis, syntax-directed translation and Intermediate code generation.	17	25	45 min	
24	**Compiler Design-2:** Parsing, Runtime environments, local optimization. Data flow analysis: constant propagation, liveness analysis, common sub-expression elimination	17	25	45 min	

Test No.	Test Syllabus	No. of Ques.	Marks	Duration	Activation Date
Single Subject Tests					
25	Theory of Computation	33	50	90 min	Active
26	Algorithms	33	50	90 min	
27	Computer Organization and Architecture	33	50	90 min	
28	Operating System	33	50	90 min	
29	Engineering Mathematics	33	50	90 min	
30	General Aptitude	33	50	90 min	
31	Database	33	50	90 min	Active
32	Programming and Data Structures	33	50	90 min	
33	Computer Networks	33	50	90 min	
34	Digital Logic	33	50	90 min	
35	Compiler Design	33	50	90 min	
36	Discrete Mathematics	33	50	90 min	
Multiple Subject Tests					
37	Theory of Computation + Compiler Design	33	50	90 min	Active
38	Algorithms + Programming and Data Structures	33	50	90 min	
39	Computer Organization and Architecture + Operating System	33	50	90 min	
40	Digital Logic + Discrete Mathematics	33	50	90 min	
41	Computer Networks + Databases	33	50	90 min	
42	Engineering Mathematics + General Aptitude	33	50	90 min	
Full Syllabus Tests					
43	Full Syllabus Test-1 (Basic Level)	65	100	180 min	Active
44	Full Syllabus Test-2 (Basic Level)	65	100	180 min	
45	Full Syllabus Test-3 (Basic Level)	65	100	180 min	
46	Full Syllabus Test-4 (Basic Level)	65	100	180 min	
47	Full Syllabus Test-5 (Advance Level)	65	100	180 min	Active
48	Full Syllabus Test-6 (Advance Level)	65	100	180 min	
49	Full Syllabus Test-7 (Advance Level)	65	100	180 min	
50	Full Syllabus Test-8 (Advance Level)	65	100	180 min	
Mock Tests					
51	GATE Mock Test 1	65	100	180 min	Active
52	GATE Mock Test 2	65	100	180 min	
53	GATE Mock Test 3	65	100	180 min	
54	GATE Mock Test 4	65	100	180 min	