

Detailed Schedule

## GATE 2024: **Online Test Series** COMPUTER SCIENCE & IT



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					
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	Active				
4	Algorithms-2: Hashing, Graph search, minimum spanning trees, shortest paths and dynamic programming.	17	25	45 min					
5	<b>Computer Organization and Architecture-1:</b> 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					
8	Databases-2: Tuple calculus, SQL, Integrity constraints, File organization, Transactions and concurrency control.	17	25	45 min					
9	<b>Engineering Mathematics-1:</b> 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	<b>Engineering Mathematics-2:</b> Limits, continuity and differentiability. Maxima and minima. Mean value theorem. Integration, determinants and LU decomposition, Conditional probability and Bayes theorem.	17	25	45 min	Active				
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	<b>Operating System-1:</b> Memory management, virtual memory and Deadlock and File systems.	17	25	45 min					
14	<b>Operating System-2:</b> 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	Active				
17	<b>Computer Networks-1:</b> 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	<b>Computer Networks-2:</b> 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					
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	Active				
23	Compiler Design-1: Lexical analysis, syntax-directed translation and Intermediate code generation.	17	25	45 min					
24	<b>Compiler Design-2:</b> Parsing, Runtime environments, local optimization. Data flow analysis: constant propagation, liveness analysis, common sub-expression elimination	17	25	45 min					

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