GATE - 2023 TEST SERIES

OVERVIEW

- **Topic and Full Test:**

  After completion of each topic and subject a test will be conducted. Each topic test consists of at least 25 questions of 2 marks and each full length test consists of at least 40 questions of 2 marks. The duration of topic test will be 45 mins and full test will be 2 hours. The number of test per subject will be as follows:

S.No.	Subject Name	# Topic Test	# Full Test	Total	Tentative Months of Test
1	Discrete Mathematics(DM)	5	1	6	March - April
2	C-Programming(C-Prog)	1	1	2	April
3	Data Structure And Algorithms(DSA)	4	1	5	April -May
4	Computer Network(CN)	4	1	5	May - June
5	Operating System(OS)	3	1	4	June - July
6	Digital Logic (DL)	2	1	3	July
7	Computer Organization And Architecture(COA)	4	1	5	August
8	Database Management System(DBMS)	4	1	5	August - September
9	Theory Of Computation(TOC)	2	1	3	September - October
10	Compiler Design(CD)	1	1	2	October
11	Mathematics(MATHS)	4	1	5	August
12	Aptitude(APTI)	2	1	3	September
Total		**48**			

Total number of topic test will be 48.

- **Round-1 Tests (Full Test):**

In the month of October and November Round 1 of subject test will be conducted. Per subject there will be two tests in a week. Each test covers the full syllabus of subject plus one of the topic from math's and aptitude, and consists of 40 questions, out of which 34 questions form technical section and 6 questions from Math's and Aptitude (3 each) section. The duration of each round 1 test will be 2 hours. The number of test per subject will be as follows:

S.No.	Subject Name	# Full Test
1	Discrete Mathematics(DM)	2
2	Data Structure And Algorithms(DSA)	2
3	Computer Network(CN)	2
4	Operating System(OS)	2
5	Digital Logic (DL)	2
6	Computer Organization And Architecture(COA)	2
7	Database Management System(DBMS)	2
8	Theory Of Computation(TOC)	2

9	Compiler Design(CD)	2
Total		**18**

Total number of Round- 1 test will be 18.

- **Round-2 Tests (Mixed):**

In the month of December Round 2 of mixed (2 or 3) subjects test will be conducted. Per mixed subjects test there will be two tests in a week. Each test covers the full syllabus of subjects plus math's and aptitude, and consists of 65 questions, out of which 55 questions form technical section and 10 questions from Math's and Aptitude (5 each) section.The duration of each round 2 tests will be 3 hours. The number of test per mixed subject will be as follows:

S.No.	Subject Name	# Mixed Full Test
1	OS + DBMS + C Language	2
2	DS and Algorithm + Network	2
3	Discrete + TOC + Compiler	2
4	Digital + COA	2

Total number of Round- 2 test will be 8.

- **Round-3 Tests (MOCK):**

In the month of January Round 3 of MOCK test will be conducted. Per week there will be two MOCK tests. Each test covers the full syllabus of GATE exam, and consists of 65 questions, out of which 55 questions form technical, and math section, and 10 questions from Aptitude. **Total number of MOCK test will be 8.**So, in the complete test series **total number of test will be 84 including 2 Mock Test for IIIT-H.**

SYLLABUS OF EACH TOPIC TEST

SNo.	Subject Name	Test Number	Test ID	Topic
1	Discrete Mathematics (DM)	Test- 1	1	Set Theory, Properties Of Relation & Equivalence Relation
		Test - 2	2	Partial Order Relation, Lattices& Function
		Test - 3	3	Algebraic System (Group Theory)
		Test - 4	4	Graph Theory
		Test - 5	5	Logic
		Test Full	6	Complete Syllabus
2	C-Programming (C-Prog)	Test - 1	7	Basic Programming (Operators And Expressions, Data Types And Input-Output Operators, Control Statements And Decision Making, Arrays, Strings and Functions
		Test Full	8	Complete Syllabus (Basic Programming, Pointers, Structures And Unions)
3	Data Structure And Algorithms (DSA)	Test - 1	9	Bubble Sort, Selection Sort, Insertion Sort, Heap Sort, Basic Concept Of Asymptotic Notations, Time Complexity
		Test - 2	10	Recurrence Relation (Iterative, Master's And Tree Method), Complexity Of Code, Merge Sort, Quick Sort, Counting Sort, Radix Sort, Searching (Linear & Binary)
		Test - 3	11	Stack, Recursion, Queue, Linked List, Binary Tree, Binary Search

				Tree, Construction Of AVL Tree,
		Test - 4	12	AVL Tree, Greedy & Dynamic Approach, 0/1 Knapsack Problem, Fractional Knapsack Problem, Job Scheduling With Deadline, Huffman Encoding, Dijkstra's & Bellman Ford Algorithm, LCS Problem, Matrix Chain Multiplication Problem, Optimal File Merge Pattern, Graphs Algorithm (DFS, BFS, Prim's, Kruskal's)
		Test Full	13	Complete Syllabus
4	Computer Network (CN)	Test - 1	14	Layered Model: OSI And TCP/IP, Data Link Layer(Framing, Error Control And Flow Control)
		Test - 2	15	Data Link Layer (MAC), Basics Of Packet, Circuit And Virtual Circuit-Switching; Ethernet Bridging; Network Devices (Hub, Repeater, Switch/Bridge And Routers)
		Test - 3	16	Routing Algorithms (Distance Vector, Link State), Ipv4 Addressing, Formatting, CIDR, NAT, ICMP.
		Test - 4	17	TCP/UDP, Sockets, Congestion Control, Application Layer Protocols (DNS, SMTP, POP, FTP, HTTP And DHCP).
		Test Full	18	Complete Syllabus
5	Operating System (OS)	Test - 1	19	Basics Of OS, Process Management, Thread Management, CPU - Scheduling.
		Test - 2	20	Inter-Process Communication, Concurrency And Synchronization And Deadlock.
		Test - 3	21	Memory Management, Virtual Memory, File Systems And Disk Scheduling
		Test Full	22	Complete Syllabus
6	Digital Logic (DL)	Test - 1	23	Boolean Algebra, Minimization, K-Map And Combinational Circuits
		Test - 2	24	Combinational Circuits And Sequential Circuits
		Test Full	25	Complete Syllabus
7	Computer Organization And Architecture (COA)	Test - 1	26	Number System
		Test - 2	27	Cache Memory
		Test - 3	28	Instruction Set Architecture And Addressing Mode, And Basics Pipeline Concept
		Test - 4	29	Advanced Pipeline Concept, I/O Interface(Interrupt And DMA), ALU, Data-Path And Control Unit
		Test Full	30	Complete Syllabus
8	Database Management System (DBMS)	Test - 1	31	Relational Model, SQL - 1 (Create, Insert, Update, Select, Aggregate Functions, Group By, Order By, Nested Query, Self Join, Constraints)
		Test - 2	32	SQL – 2 (FULL) and Relational Algebra - 1
		Test - 3	33	Relational Algebra - 2 And Normalization
		Test - 4	34	Indexing, B-Tree, B+-Tree, Hashing, Transaction And Concurrency Control
		Test Full	35	Complete Syllabus (Including ER-Model)
9	Theory Of Computation (TOC)	Test - 1	36	Chomsky Classification Of Grammar, Regular Expression, Finite Automata, Regular Language, DFA, NFA, Minimization Of DFA, NFA To DFA Conversion, Properties Of Regular Language, Pumping Lemma For Regular Languages,
		Test - 2	37	CFL, PDA, CFG, Properties Of CFL, Pumping Lemma For CFL, Construction Of TM, Types Of TM, Decidability And Undecidability Of Language, Countably Finite And Infinite Languages.

		Test Full	38	Complete Syllabus
10	Compiler Design (CD)	Test - 1	39	Parameter Passing Techniques, Lexical Analysis, Syntax Analysis(LL, LR, SLR, CLR, LALR)
		Test Full	40	**Complete Syllabus** (Parameter Passing Techniques, Lexical Analysis, Syntax Analysis(LL, LR, SLR, CLR, LALR, Syntax-Directed Translation, Runtime Environments, Intermediate Code Generation And Code Optimization)
11	Mathematics (MATH)	Test - 1	41	Matrices
		Test - 2	42	Calculus
		Test - 3	43	Permutation & Combination
		Test - 4	44	Probability
		Test Full	45	Complete Syllabus
12	Aptitude	Test – 1	46	Quantitative Aptitude and Verbal Aptitude
		Test - 2	47	Analytical Aptitude and Spatial Aptitude
		Test Full	48	Complete Syllabus

SYLLABUS OF MATH'S AND APTITUDE IN EACH ROUND – 1 TEST

Round - 1 (Subject Wise Full Test)		
Subject Name	**Math's Syllabus**	**Aptitude Syllabus**
Digital Logic	Matrices	Number System + HCF & LCM ++ Quadratic equation+ logarithm
	Matrices	Number System + HCF & LCM + Quadratic equation + logarithms
Computer Organization and Architecture	Calculus	Percentage + Profit & Loss + SI & CI + Partnership
	Calculus	Percentage + Profit & Loss + SI & CI + Partnership
Database Management System	PNC	Average + Ratio & Proportion + Mixture & Allegation+Calendar + Geometry And Menstruation
	PNC	Average + Ratio & Proportion + Mixture & Allegation+Calendar + Geometry And Menstruation
Operating System	Probability	Time & Work + Time, Speed & Distance + Boat & Stream, Races and circular Track, clock
	Probability	Time & Work + Time, Speed & Distance + Boat & Stream, Races and circular Track, clock
Computer Network	Matrices	Data Interpretation + Analytic Reasoning + Direction Sense Test
	Calculus	Data Interpretation + Analytic Reasoning + Direction Sense Test
Data Structure and Algorithm	PNC	Calendar + Geometry And Menstruation +Number Series + Blood Relationship + Coding Decoding
	Probability	Calendar + Geometry And Menstruation + Number Series + Blood Relationship + Coding Decoding
Discrete Mathematics	Matrices	Basic English grammar, Basic vocabulary: words, idioms, and Reading and comprehension, Narrative sequencing
	Calculus	Basic English grammar, Basic vocabulary: words, idioms, and Reading and comprehension, Narrative sequencing
Theory of Computation	PNC	Analytical Aptitude
	Probability	Analytical Aptitude
Compiler & C	Matrices	Spatial Aptitude

Language	Probability	Spatial Aptitude

SYLLABUS OF MATH'S AND APTITUDE IN EACH ROUND – 2 TEST

Round – 2 (Mixed Subject Wise Full Test)	
Subject Name	**Syllabus**
OS + DBMS + C Language	Full Syllabus of OS + DBMS + C Language + Math's + Aptitude
DS and Algorithm + Network	Full Syllabus of DS and Algorithm + Network + Math's + Aptitude
Discrete + TOC + Compiler	Full Syllabus of Discrete + TOC + Compiler + Math's + Aptitude
Digital + COA	Full Syllabus Digital + COA + Math's + Aptitude

Note:

SYLLABUS OF MATH'S AND APTITUDE IN EACH MOCK TEST

Round – 3 (Mock Test)	
Mock Test	All Subject Syllabus + Math's + Aptitude
Mock Test	All Subject Syllabus + Math's + Aptitude
Mock Test	All Subject Syllabus + Math's + Aptitude
Mock Test	All Subject Syllabus + Math's + Aptitude
Mock Test	All Subject Syllabus + Math's + Aptitude
Mock Test	All Subject Syllabus + Math's + Aptitude
Mock Test	All Subject Syllabus + Math's + Aptitude
Mock Test	All Subject Syllabus + Math's + Aptitude

Notes:

1. Each round-2 papers consist of total 65 questions, out of which 55 questions form technical section and 10 questions from Math's and Aptitude (5 each) section.

2. Each round-3 (MOCK) papers consist of total 65 questions. The paper pattern is exactly similar to GATE exam.

3. The maximum marks of each round 2 and 3 paper will be 100 and will be duration of 3 hrs.

3. The detail schedule of Round - 1, 2 and Mock test will be published in the month of JULY.