Detailed Schedule

DA

GATE 2025: Online Test Series





| Topicwise Tests |  |                 |       |        |                    |  |  |  |
|-----------------|--|-----------------|-------|--------|--------------------|--|--|--|
| Test<br>No.     | Test Syllabus  | No. of<br>Ques. | Marks | Time   | Activation<br>Date |  |  |  |
| 1               | Linear Algebra-1: Vector space, subspaces, linear dependence and independence of vectors, matrices, projection matrix, orthogonal matrix.  | 17              | 25    | 45 min | 01-04-2024         |  |  |  |
| 2               | Linear Algebra-2: Systems of linear equations and solutions; Gaussian elimination, eigenvalues and eigenvectors, determinant, rank, nullity, projections, LU decomposition, singular value decomposition.  | 17              | 25    | 45 min |                    |  |  |  |
| 3               | Calculus and Optimization-1: Functions of a single variable, limit, continuity and differentiability.  | 17              | 25    | 45 min |                    |  |  |  |
| 4               | Calculus and Optimization-2: Taylor series, maxima and minima, optimization involving a single variable.   | 17              | 25    | 45 min |                    |  |  |  |
| 5               | <b>Probability and Statistics-1:</b> Counting (permutation and combinations), probability axioms, Sample space, events, independent events, mutually exclusive events, marginal, conditional and joint probability, Bayes Theorem.   | 17              | 25    | 45 min | 15-04-2024         |  |  |  |
| 6               | Probability and Statistics-2: Conditional and joint probability, Bayes Theorem, conditional expectation and variance,<br>mean, median, mode and standard deviation, correlation, and covariance, random variables, discrete random variables<br>and probability mass functions, uniform.   | 17              | 25    | 45 min |                    |  |  |  |
| 7               | Probability and Statistics-3: Bernoulli, binomial distribution, Continuous random variables and probability distribution function, uniform, exponential, Poisson, normal, standard normal, t-distribution, chi-squared distributions, cumulative distribution function, Conditional PDF, Central limit theorem, confidence interval, z-test, t-test, chi-squared test. | 17              | 25    | 45 min |                    |  |  |  |
| 8               | General Aptitude-1: Numerical Ability: Numerical computation, numerical estimation, numerical reasoning and data interpretation.   | 17              | 25    | 45 min |                    |  |  |  |
| 9               | General Aptitude-2: Verbal Ability: English grammar, sentence completion, verbal analogies, word groups, instructions, critical reasoning and verbal deduction.  | 17              | 25    | 45 min |                    |  |  |  |
| 10              | Programming, Data Structures and Algorithms-1: Programming in Python, basic data structures: stacks, queues,<br>linked lists, trees, hash tables; Search algorithms: linear search and binary search.  | 17              | 25    | 45 min |                    |  |  |  |
| 11              | Programming, Data Structures and Algorithms-2: Basic sorting algorithms: selection sort, bubble sort and insertion sort; divide and conquer: mergesort, quicksort; introduction to graph theory; basic graph algorithms: traversals and shortest path.   | 17              | 25    | 45 min | n                  |  |  |  |
| 12              | Machine Learning-1: Supervised Learning: regression and classification problems, simple linear regression, multiple linear regression, ridge regression, logistic regression, k-nearest neighbour, Naive Bayes classifier.   | 17              | 25    | 45 min |                    |  |  |  |
| 13              | Machine Learning-2: Linear discriminant analysis, support vector machine, decision trees, bias-variance trade-off, cross-validation methods such as leave-one-out (LOO) cross-validation, k-folds cross-validation.  | 17              | 25    | 45 min |                    |  |  |  |
| 14              | Machine Learning-3: Multi-layer perceptron, feed-forward neural network; (ii) Unsupervised Learning: clustering<br>algorithms, k-means/k-medoid, hierarchical clustering, top-down, bottom-up: single-linkage, multiple linkage,<br>dimensionality reduction, principal component analysis.  | 17              | 25    | 45 min |                    |  |  |  |
| 15              | Artificial Intelligence-1: Informed, uninformed, adversarial; logic, propositional, predicate; reasoning under uncertainty topics - conditional independence representation.   | 17              | 25    | 45 min | min                |  |  |  |
| 16              | Artificial Intelligence-2: Exact inference through variable elimination, and approximate inference through sampling.   | 17              | 25    | 45 min | 15-05-2024         |  |  |  |
| 17              | Database Management and Warehouse-1: ER-model, relational model: relational algebra, tuple calculus, SQL, integrity constraints.   | 17              | 25    | 45 min |                    |  |  |  |
| 18              | Database Management and Warehouse-2: Normal form, file organization, Discretization, sampling, compression; data warehouse modelling: schema for multi-dimensional data models, concept hierarchies, measures: categorization & computations   | 17              | 25    | 45 min | 1                  |  |  |  |
|                 | Single Subject Tests   |                 |       |        |                    |  |  |  |
| 19              | Linear Algebra   | 33              | 50    | 90 min |                    |  |  |  |
| 20              | Calculus and Optimization  | 33              | 50    | 90 min | 15-06-2024         |  |  |  |
| 21              | Probability and Statistics   | 33              | 50    | 90 min | 13-00-2024         |  |  |  |
| 22              | Programming, Data Structures and Algorithms  | 33              | 50    | 90 min |                    |  |  |  |
| 23              | Database Management and Warehouse  | 33              | 50    | 90 min |                    |  |  |  |
| 24              | Machine Learning   | 33              | 50    | 90 min | 15-07-2024         |  |  |  |
| 25              | Artificial Intelligence  | 33              | 50    | 90 min |                    |  |  |  |
| 26              | General Aptitude   | 33              | 50    | 90 min |                    |  |  |  |

Detailed Schedule

DA

GATE 2025: **Online Test Series** DATA SCIENCE AND ARTIFICIAL INTELLIGENCE



| Full Syllabus Test |                                      |                 |       |         |                    |  |
|--------------------|--------------------------------------|-----------------|-------|---------|--------------------|--|
| Test<br>No.        | Test Syllabus                        | No. of<br>Ques. | Marks | Time    | Activation<br>Date |  |
| 27                 | Full Syllabus Test-1 (Basic Level)   | 65              | 100   | 180 min |                    |  |
| 28                 | Full Syllabus Test-2 (Basic Level)   | 65              | 100   | 180 min | 15-08-2024         |  |
| 29                 | Full Syllabus Test-3 (Basic Level)   | 65              | 100   | 180 min | 15-06-2024         |  |
| 30                 | Full Syllabus Test-4 (Basic Level)   | 65              | 100   | 180 min |                    |  |
| 31                 | Full Syllabus Test-5 (Advance Level) | 65              | 100   | 180 min |                    |  |
| 32                 | Full Syllabus Test-6 (Advance Level) | 65              | 100   | 180 min | 15-09-2024         |  |
| 33                 | Full Syllabus Test-7 (Advance Level) | 65              | 100   | 180 min | 15-05-2024         |  |
| 34                 | Full Syllabus Test-8 (Advance Level) | 65              | 100   | 180 min |                    |  |
| 35                 | GATE Mock Test 1                     | 65              | 100   | 180 min |                    |  |
| 36                 | GATE Mock Test 2                     | 65              | 100   | 180 min | 15-10-2024         |  |
| 37                 | GATE Mock Test 3                     | 65              | 100   | 180 min | 15-10-2024         |  |
| 38                 | GATE Mock Test 4                     | 65              | 100   | 180 min |                    |  |



GATE 2024 Online test series

## **Detailed Schedule**

## DATA SCIENCE AND ARTIFICIAL INTELLIGENCE

| Full Syllabus Tests                                   |                         |              |       |         |                 |  |  |  |
|---|-------------------------|--------------|-------|---------|-----------------|--|--|--|
| Test No.  | Test Syllabus           | No. of Ques. | Marks | Time    | Activation Date |  |  |  |
| 1   | Full Syllabus Test - 1  | 65           | 100   | 180 min | Active          |  |  |  |
| 2   | Full Syllabus Test - 2  | 65           | 100   | 180 min | Active          |  |  |  |
| 3   | Full Syllabus Test - 3  | 65           | 100   | 180 min | Active          |  |  |  |
| 4   | Full Syllabus Test - 4  | 65           | 100   | 180 min | Active          |  |  |  |
| 5   | Full Syllabus Test - 5  | 65           | 100   | 180 min | Active          |  |  |  |
| 6   | Full Syllabus Test - 6  | 65           | 100   | 180 min | Active          |  |  |  |
| 7   | Full Syllabus Test - 7  | 65           | 100   | 180 min | Active          |  |  |  |
| 8   | Full Syllabus Test - 8  | 65           | 100   | 180 min | Active          |  |  |  |
| Access of below tests after GATE Admit Card Uploading |                         |              |       |         |                 |  |  |  |
| 9   | Full Syllabus Test - 9  | 65           | 100   | 180 min | Active          |  |  |  |
| 10  | Full Syllabus Test - 10 | 65           | 100   | 180 min | Active          |  |  |  |
| 11  | Full Syllabus Test - 11 | 65           | 100   | 180 min | Active          |  |  |  |
| 12  | Full Syllabus Test - 12 | 65           | 100   | 180 min | Active          |  |  |  |

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