# L J Institute of Engineering and Technology, Ahmedabad

## Theory Test (T1,T2,T3,T4) Details_SEM-IV_2025_ COMPUTER ENGINEERING/INFORMATION TECHNOLOGY STUDENTS

| Subject Code | Subject | Test | Syllabus | | | Marks Weightage | | | | Total Marks | Total Duration Max. 1.5 Hr Min. 1 Hr |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unit No | Unit Title | % of Syllabus | MCQ | Theory Descriptive | Formulas and Derivation | Numerical | | |
| 117013491(CE), 117023491(IT), 117033491(CSD), 117043491(AIML), 117053491(AIDS), 117063491(RAI) 117123491(CSE), 117133491(CST), 117143491(CSIT), 117153491(CEA) | Discrete Mathematics | T1 | 1 | Set Theory | 8.0% | 5 | 0 | 0 | 20 | 25 | 1.25 |
| | | | 2 | Functions and Counting | 9.0% | | | | | | |
| | | | 3 | Propositional Logic | 10.0% | | | | | | |
| | | | T1 Test Syllabus: | | 27% | T1 Test Marks: 25 | | | | | |
| | | T2 | 4 | Propositional and Predicate Logic | 8.0% | 5 | 0 | 0 | 20 | 25 | 1.25 |
| | | | 5 | Recurrence Relations | 7.0% | | | | | | |
| | | | 6 | Relations | 11.0% | | | | | | |
| | | | T2 Test Syllabus: | | 26% | T2 Test Marks: 25 | | | | | |
| | | T3 | 7 | Partial Ordering | 13.0% | 5 | 0 | 0 | 20 | 25 | 1.25 |
| | | | 8 | Algebraic Structures | 11.0% | | | | | | |
| | | | T3 Test Syllabus: | | 24% | T3 Test Marks: 25 | | | | | |
| | | T4 | 9 | Graph Theory | 12.0% | 5 | 0 | 0 | 20 | 25 | 1.25 |
| | | | 10 | Network Flows and Trees | 11.0% | | | | | | |
| | | | T4 Test Syllabus: | | 23% | T4 Test Marks: 25 | | | | | |
| | | | Total T1 to T4 Tests : | | 100% | 20 | 0 | 0 | 80 | 100 | |

| Subject Code | Subject | Test | Syllabus | | | Marks Weightage | | | | Total Marks | Total Duration Max. 1.5 Hr Min. 1 Hr |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unit No | Unit Title | % of Syllabus | MCQ | Theory Descriptive(Mainly Programming) | Formulas and Derivation | Numerical | | |
| 017013492(CE), 017023492(IT), 017033492(CSD), 017043492(AIML), 017053492(AIDS), 017063492(RAI), 017123492(CSE), 017133492(CST), 017143492(CSIT), 017153492(CEA) | Full Stack Development -2 | T1 | 1 | JSON(Javascript Object Notation) | 5.0% | 10 | 15 | 0 | 0 | 25 | 1.25 |
| | | | 2 | Node JS-1 | 15.0% | | | | | | |
| | | | 3 | Node JS-2 | 10.0% | | | | | | |
| | | | T1 Test Syllabus: | | 30% | T1 Test Marks: 25 | | | | | |
| | | T2 | 4 | Express JS-1 | 10.0% | 10 | 15 | 0 | 0 | 25 | 1.25 |
| | | | 5 | Express JS-2 | 10.0% | | | | | | |
| | | | T2 Test Syllabus: | | 20% | T2 Test Marks: 25 | | | | | |
| | | T3 | 6 | React JS-1 | 15.0% | 10 | 15 | 0 | 0 | 25 | 1.25 |
| | | | 7 | React JS-2 | 10.0% | | | | | | |
| | | | T3 Test Syllabus: | | 25% | T3 Test Marks: 25 | | | | | |
| | | T4 | 8 | Git | 5.0% | 10 | 15 | 0 | 0 | 25 | 1 |
| | | | 9 | MongoDB-1 | 10.0% | | | | | | |
| | | | 10 | MongoDB-2 | 10.0% | | | | | | |
| | | | T4 Test Syllabus: | | 25% | T4 Test Marks: 25 | | | | | |
| | | | Total T1 to T4 Tests : | | 100% | 40 | 60 | 0 | 0 | 100 | |

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| Subject Code | Subject | Test | Syllabus | | | Marks Weightage | | | | Total Marks | Total Duration Max. 1.5 Hr Min. 1 Hr |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unit No | Unit Title | % of Syllabus | MCQ | Theory Descriptive (Logical and Programming) | Formulas and Derivation | Numerical | | |
| 017013493(CE), 017023493(IT), 017033493(CSD), 017043493(AIML), 017053493(AIDS), 017063493(RAI), 017123493(CSE), 017133493(CST), 017143493(CSIT), 017153493(CEA) | Computer Organization and Architecture | T1 | 1 | Data Representation | 2.0% | 10 | 5 | 0 | 10 | 25 | 1.25 |
| | | | 2 | Register Transfer and microoperations | 10.0% | | | | | | |
| | | | 3 | Basic Computer Organization | 12.0% | | | | | | |
| | | | **T1 Test Syllabus:** | | **24.0%** | | **T1 Test Marks: 25** | | | | |
| | | T2 | 4 | Basic Computer Design | 8.0% | 10 | 5 | 0 | 10 | 25 | 1.25 |
| | | | 5 | Programming the basic computer | 18.0% | | | | | | |
| | | | | | | | | | | | |
| | | | **T2 Test Syllabus:** | | **26.0%** | | **T2 Test Marks: 25** | | | | |
| | | T3 | 6 | Central Processing Unit | 12.0% | 10 | 0 | 0 | 15 | 25 | 1.25 |
| | | | 7 | Pipeline Processing | 10.0% | | | | | | |
| | | | 8 | Computer Arithmetic | 5.0% | | | | | | |
| | | | **T3 Test Syllabus:** | | **27%** | | **T3 Test Marks: 25** | | | | |
| | | T4 | 9 | Memory Organization | 14.0% | 15 | 5 | 0 | 5 | 25 | 1.00 |
| | | | 10 | Input-Output Organization | 9.0% | | | | | | |
| | | | | | | | | | | | |
| | | | **T4 Test Syllabus:** | | **23.0%** | | **T4 Test Marks: 25** | | | | |
| | | | **Total T1 to T4 Tests :** | | **100%** | **45** | **15** | **0** | **40** | **100** | |

| Subject Code | Subject | Test | Syllabus | | | Marks Weightage | | | | Total Marks | Total Duration Max. 1.5 Hr Min. 1 Hr |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unit No | Unit Title | % of Syllabus | MCQ | Theory Descriptive (Mainly Programming) | Formulas and Derivation | Numerical | | |
| 017013494(CE), 017023494(IT), 017033494(CSD), 017043494(AIML), 017053494(AIDS), 017063494(RAI), 017123494(CSE), 017133494(CST), 017143494(CSIT), 017153494(CEA) | Theory of Computation | T1 | 1 | Introduction | 2% | 7 | 0 | 0 | 18 | 25 | 1.25 |
| | | | 2 | Regular Expressions and Languages | 5% | | | | | | |
| | | | 3 | Finite Automata 1 | 9% | | | | | | |
| | | | 4 | Finite Automata 2 | 11% | | | | | | |
| | | | **T1 Test Syllabus:** | | **27%** | | **T1 Test Marks: 25** | | | | |
| | | T2 | 5 | Deterministic Finite Automata & Non - Deterministic Finite Automata | 12% | 7 | 0 | 0 | 18 | 25 | 1.25 |
| | | | 6 | Operations on Finite Automata | 11% | | | | | | |
| | | | **T2 Test Syllabus:** | | **23%** | | **T2 Test Marks: 25** | | | | |
| | | T3 | 7 | Context Free Grammar and Languages | 17% | 8 | 0 | 0 | 17 | 25 | 1.25 |
| | | | 8 | Push down Automata | 13% | | | | | | |
| | | | **T3 Test Syllabus:** | | **30%** | | **T3 Test Marks: 25** | | | | |
| | | T4 | 9 | Turing Machine | 13% | 8 | 0 | 0 | 17 | 25 | 1.25 |
| | | | 10 | Recursively Enumerable Languages | 7% | | | | | | |
| | | | **T4 Test Syllabus:** | | **20%** | | **T4 Test Marks: 25** | | | | |
| | | | **Total T1 to T4 Tests :** | | **100%** | **30** | **0** | **0** | **70** | **100** | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unit No | Unit Title | % of Syllabus | MCQ | Theory Descriptive | Formulas and | Numerical | | |
| 117012491(CE), 117022491(IT), 117032491(CSD), 117042491(AIML), 117052491(AIDS), 117062491(RAI), 117122491(CSE), 117132491(CST), 117142491(CSIT), 117152491(CEA) | Fundamentals of Computer Science using Python - II | T1 | 1 | Python Pandas | 13% | 10 | 15 | 0 | 0 | 25 | 2.25 |
| | | | 2 | Data Visualization with Python | 7% | | | | | | |
| | | | 3 | Regular Expressions and Multi-threading | 5% | | | | | | |
| | | | **T1 Test Syllabus:** | | **25%** | **T1 Test Marks: 25** | | | | | |
| | | T2 | 4 | Introduction to Machine Learning with Python | 3% | 10 | 15 | 0 | 0 | 25 | 2.25 |
| | | | 5 | Regression –Model Training and Evaluation | 11% | | | | | | |
| | | | 6 | Classification –Model Training and Evaluation | 11% | | | | | | |
| | | | **T2 Test Syllabus:** | | **25%** | **T2 Test Marks: 25** | | | | | |
| | | T3 | 7 | Introduction to Deep Learning | 10% | 10 | 15 | 0 | 0 | 25 | 2.25 |
| | | | 8 | Web Programming using Python | 15% | | | | | | |
| | | | **T3 Test Syllabus:** | | **25%** | **T3 Test Marks: 25** | | | | | |
| | | T4 | 9 | Getting Started with Django Framework | 13% | 10 | 15 | 0 | 0 | 25 | 2.25 |
| | | | 10 | Django Models and Users | 12% | | | | | | |
| | | | **T4 Test Syllabus:** | | **25%** | **T4 Test Marks: 25** | | | | | |
| | | | **Total T1 to T4 Tests :** | | **100%** | **40** | **60** | **0** | **0** | **100** | |