

L.J. Institute of Engineering & Technology, Ahmedabad		
Computer Engineering Department		
MSE-2 Syllabus, Semester VII		
Sr. No.	Subject Name & Code	Unit/Chapter Name-Topics (As per GTU Syllabus) Total Marks-30
1	Compiler Design [3170701]	<p>Chapter-3:Syntax Analysis: Bottom up Parsing Algorithms, Operator-Precedence Parsing, LR Parsers, Using Ambiguous Grammars, Parser Generators, Automatic Generation of Parsers. Syntax-Directed Definitions, Construction of Syntax Trees, Bottom-Up Evaluation of S-Attributed Definitions, L-Attributed Definitions, syntax directed definitions and translation schemes .</p> <p>Chapter-4:Error Recovery Error Detection & Recovery, Ad-Hoc and Systematic Methods</p> <p>Chapter-5:Intermediate-Code Generation Variants of Syntax Trees, Three-Address Code, Types and Declarations, Translation of Expressions, Type Checking,</p>
2	MOBILE COMPUTING AND WIRELESS COMMUNICATION [3170710]	<p>Chap 3- Global system for mobile communication: Global system for mobile communication, GSM architecture, GSM entities, call routing in GSM, PLMN interface, GSM addresses and identifiers, network aspects in GSM, GSM frequency allocation, authentication, and security.</p> <p>General packet radio service (GPRS): GPRS and packet data network, GPRS network architecture, GPRS network operation, data services in GPRS, Applications of GPRS, Billing and charging in GPRS.</p> <p>Wireless System Operations and Standards: Cordless Systems, WiMAX and IEEE 802.16 Broadband Wireless Access Standards</p> <p>Mobile IP and Wireless Application, Protocol</p> <p>Chap 4- Wi-Fi and the IEEE 802.11 Wireless LAN Standard: IEEE 802.11 architecture and services, IEEE 802.11 Medium access control, IEEE 802.11 physical layer, Wi-Fi protected access</p> <p>Chap 5- Android APIs, Android Architecture, Application Framework, The Application components, The manifest file, downloading and installing Android, Exploring the Development Environment, Developing and Executing the first Android application, Working with Activities, The Linear Layout , The Relative Layout , The Scroll View Layout, The Table Layout, The Frame Layout, Using the Text View, Edit Text View, Button View, Radio Button, Checkbox, Image Button, Rating Bar, The options Menu, The Context Menu.</p>
3	Artificial Intelligence [3170716]	<p>Unit-4: Symbolic reasoning under uncertainty: Introduction To Nonmonotonic Reasoning, Logics For Non-monotonic Reasoning.</p> <p>Unit-5: Probabilistic reasoning: Probability And Bays' Theorem, Certainty Factors And Rule-Base Systems, Bayesian Networks, Dempster-Shafer Theory.</p> <p>Unit-6: Game playing: Overview, MiniMax Search Procedure, Alpha-Beta Cut-offs</p> <p>Unit-7: Planning: The Blocks World, Components Of a Planning System, Goal Stack Planning</p> <p>Unit-8: Natural language processing: Introduction, Syntactic Processing, Semantic Analysis, Discourse And Pragmatic Processing</p> <p>Unit-9: Connectionist Models: Introduction: Hopfield Network, Learning In Neural Network, Application Of Neural Networks, Recurrent Networks, Connectionist AI and Symbolic AI.</p>
4	Machine Learning [3170724]	<p>Unit-5 Overview of Probability: Statistical tools in Machine Learning, Concepts of probability</p> <p>Unit-6 Bayesian Concept Learning: Impotence of Bayesian methods, Bayesian theorem, Bayes' theorem and concept learning, Bayesian Belief Network</p> <p>Unit-7 Supervised Learning: Classification and Regression: Supervised Learning, Classification Model, Learning steps, Classification algorithms, Regression, Regression algorithms</p> <p>Unit-8 Unsupervised Learning: Supervised vs. Unsupervised Learning, Applications, Association rules</p>
5	Mobile Application Development [3170726]	<p>Unit : 5 Database Connectivity</p> <p>Storage in Android, Shared Preferences, Shared Preferences Layout, Android Requesting Permission at run time (Android 6.0), Work with SD Card and Files, Database in Android, Realm-No SQL Database</p> <p>Unite: 6 Applicability to Industrial Projects</p> <p>Web services and Parsing, JSON Parsing, Access web data with JSON, Connect to Web Services, Using Async Task & Third Party Library : Retrofit</p> <p>Unit : 7 Advanced Android Development</p> <p>Google Map, Location Service and GPS, Creating Google Map, Work with Location, Location service with Location Manager, Find Current Location, Geo coding</p>
6	Information Security [3170720]	<p>Unit-4 Diffie-Hillman Key Exchange algorithm, Man-in-Middle attack</p> <p>Unit-5 Cryptographic Hash Functions, their applications, Simple hash functions, its requirements and security, Hash functions based on Cipher Block Chaining, Secure Hash Algorithm (SHA)</p> <p>Unit-6 Message Authentication Codes, its requirements and security, MACs based on Hash Functions, Macs based on Block Ciphers</p> <p>Unit-7 Digital Signature, its properties, requirements and security, various digital signature schemes</p>