

## Syllabus for Sandip University Joint Entrance Exam(SU-JEE)

Exam Name – SU-JEE MCA

Heads	Syllabus	No of Questions
<b>Unit-I</b>	<p><b>INTRODUCTION TO C LANGUAGE</b> - History ,Structure of a C program ,Functions as building blocks ,Application Areas ,Keywords ,Identifiers ,Variables ,Constants ,Data types ,Comments,Operators and Expressions Operator types,precedence and associativity,Built in operators and functions, ,Control Structures ,Functions in C , Arrays ,Pointers ,Strings ,Structures and Unions ,File Handling ,C Preprocessor.</p> <p><b>INTRODUCTION TO PROBLEM SOLVING</b> -problem solving techniques,steps in problem solving,Algorithms and flowcharts,Characteristics of an algorithm,conditional pseudo-code,Loops in pseudo-code,Time complexity.</p>	20
<b>Unit-II</b>	<p><b>OBJECT ORIENTED PROGRAMMING USING 'C++'</b>-Elements of Object Oriented programming, Objects, Classes, OOP features,Classes &amp; Objects,Constructors &amp; Destructors,Operator overloading ,Dynamic objects,Inheritance,Virtual functions,Exception handling. Linked List, Representation of Single, Double, Header, Circular Single and Double Linked list,Stacks and queues,Trees and Graphs. Searching and sorting,Introduction to Files &amp; Concept of Records,Direct File Organisation</p>	20

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<b>Unit-III</b>	<p><b>ENVIRONMENTAL SCIENCE</b> :The Multidisciplinary nature of environmental studies, Definition, scope and importance, Need for public awareness ,Natural Resources,Ecosystems ,Environmental Pollution ,Disposal of e -waste,Introduction to Green IT ,Right of Information Act .</p> <p><b>INFORMATION SYSTEMS ANALYSIS AND DESIGN</b>:Definition of the system, Characteristics, elements, Types of Systems , Business Information system, Categories of a system, Introduction to structured methods of analysis, Overview of System, Analysis and Design,Role of a systems Analyst, Skills required to be system analyst, Requirement analysis, Role of user in requirement analysis ,Feasibility studies, Requirements determination, Logical design, Physical design, Program design, Risk and feasibility analysis,prototyping,Feasibility Analysis ,Information requirement analysis: Process modeling with physical and logical data flow diagrams, Data modeling with entity–relationship diagrams, Normalization up to 3NF</p>	20
<b>Unit-IV</b>	<p><b>OPERATING SYSTEM</b> :Operating system using Linux-Definition of Operating System, Types of Operating System, features of Unix, Basic Architecture of Unix/Linux system, features of Kernel and Shell. Unix</p>	20

	<p>File system-Boot block, super block, Inode table, data blocks, How Unix/Linux kernel access files,</p> <p>Unix/Linux standard file system. Structure of file system, Essential Linux commands ,file comparisons,Filters and pipes ,The process ,Mathematical commands,Creating and editing files with VI editor with their command options, Communication,System administration Common administrative tasks, identifying administrative files ,Installation of Unix/Linux system.</p>	
<b>Unit-V</b>	<p><b>QUANTITATIVE</b></p> <p><b>APTITUDE</b>-Area,Average,Boats and streams,surds and indices,Ratio and proportion,Pipes and Cisterns,Partnership,Volume and surface area,Compound interest,Problem on Ages,Percentage,HCF and LCM,Simple interest,Problems on trains,Profit and loss,Time and distance,Time and work.</p>	20
<b>Total</b>		<b>100</b>