

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

Program Name – SU-JEE MTech Cloud Technology

Sr. No	Topic/subject/section/Unit Name	Number of Question
1.	Cloud Computing Fundamental: Cloud Computing definition, private, public and hybrid cloud. Cloud types; IaaS, PaaS, SaaS. Benefits and challenges of cloud computing, public vs private clouds, role of virtualization in enabling the cloud; Business Agility: Benefits and challenges to Cloud architecture. Application availability, performance, security and disaster recovery; next generation Cloud Applications.	20
2.	Data structure Programming : Machine instructions and addressing modes, ALU and data-path, CPU control design, Memory interface, I/O interface (Interrupt and DMA mode), Instruction pipe-lining. Programming in C; Functions, Recursion, Parameter passing, Scope, Binding; Abstract data types, Arrays, Stacks, Queues, Linked Lists, Trees, Binary search trees, Binary heaps	20
3.	Data Base Process Fundamental: ER-model, Relational model (relational algebra, tuple calculus), Database design (integrity constraints,	20

	<p>normal forms), Query languages (SQL), File structures (sequential files, indexing, Band B+ trees), Transactions and concurrency control. Information gathering, requirement and feasibility analysis, data flow diagrams, process specifications, input/output design, process life cycle, planning and managing the project, design,coding, testing, implementation, maintenance</p>	
<p>4.</p>	<p>Network Fundamental: ISO/OSI stack, LAN technologies (Ethernet, Token ring), Flow and error control techniques,Routing algorithms, Congestion control, TCP/UDP and sockets, IP(v4), Application layer protocols (icmp, dns, smtp, pop, ftp, http); Basic concepts of hubs, switches, gateways, and routers. Network security basic concepts of public key and private key cryptography, digital signature, firewalls.</p>	<p>20</p>
<p>5.</p>	<p>Security Concepts: Confidentiality, privacy, integrity, authentication, non repudiation, availability, access control, defense in depth, least privilege, how these concepts apply in the cloud, what these concepts mean and their importance in PaaS, IaaS and SaaS. e.g. User authentication in the cloud ; Information security- Information Management Technologies,Security policies, Policy enforcement & related issues, Design</p>	<p>20</p>

	principles, Multilevel relational data models, Security impact on database function	
	Total	100