

સીસ્ટમ એનાલીસ્ટ ની સ્પર્ધાત્મક લેખિત પરીક્ષાનો અભ્યાસક્રમ(માધ્યમ:-અંગ્રેજી)

Sr. No	Details	Marks
1	General Knowledge, Mathematics, Logical Reasoning, English	20
2	Database and Data Structure Integrity Constraints, Normal Forms, File Organization, Indexing, Transactions and Concurrency Control, Data Storage Technologies and Network	20
3	Software Development and Software Engineering Software engineering principles, SDLC, Agile Programming, Software Testing and project management Understanding in programming concepts; practical knowledge in HTML/XML/PHP/Java/Ajax/.net/VB/C#; Familiarity in Open source tools usage in software development; platforms and Operating systems; Web servers – Microsoft IIS, Apache, Web services and applications; Software process and SDLCs; DBMS, SQL; Feasibility and Requirement analysis; Software design, software testing and maintenance; Software quality, assurance, certification; SCADA, Service-Level Agreement (SLA).	20
4	Algorithms Analysis, Asymptotic Notation, Notions of Space and Time Complexity, Worst and Average Case Analysis; Design: Greedy Approach, Dynamic Programming, Divide-And-Conquer; Tree and Graph Traversals, Connected Components, Spanning Trees, Shortest Paths; Hashing, Sorting, Searching. Asymptotic Analysis (Best, Worst, Average Cases) of Time and Space, Upper and Lower Bounds, Basic Concepts of Complexity Classes – P, NP, NP-HARD, NP-Complete.	15
5	Operating System Processing, System Structure, Networking, Internetworking: Concept, Architecture and Protocols, Windows Server 2012, Security and Management	5



6	Cyber security Threats, Vulnerabilities and attacks for organizations; Data security, Data privacy, Data protection; Privacy implications in social network; Hackers and Crackers; Ethical Hacking, Denial of Service attacks, WIFI Hotspot, Botnet, Cybercrimes and the Indian IT Act 2000 (amended from time to time), IT security risk management, ISO/IEC 27000, Indian Computer Emergency Response Team (CERT-In) Roles and Functions	5
7	Cloud Computing Various Model, Architecture, Infrastructure as a Service(IaaS), Platform as a Service(PaaS), Software as a Service(SaaS) ,Cloud Security	5
8	Current Trends and Recent Advancement in the IT field. Government IT Policies and IT Project	10
Total		100

