

M.C.A. SEM – V
MCA – 53 : E-Security and Software Standards

TEACHING SCHEME (per week)		Examination Scheme					
		INT		EXT		TOTAL	
Th. (hours)	Pr. (hours)	Th. (marks)	Pr. (marks)	Th. (marks)	Pr. (marks)	Th. (marks)	Pr. (marks)
4	---	30	---	70	---	100	---

UNIT I

(25%)

Pros & Cons in Electronic Security (Panko & Stallings): Overview & importance of E-Security, E-Security in real life application & problems, Attack Methods: The difference between targeted attacks and target-of-opportunity attacks, Typical Steps in break-in attacks, Denial-of-service (DoS) attacks, Target-of-opportunity malware attacks. Intruders: Intrusion Detection, Password Management

UNIT II

(25%)

System & Web Security (Stallings): Malicious software: Viruses and Related threats, Virus counter measures, Firewalls: Firewall, Firewall Design Principles, Trusted Systems, Web Security: Web Security Considerations, Secure socket layers and Transport Layer Security, Secure Electronic Transaction E-mail security: Pretty Good Privacy, S/MIME (Secure/ Multipurpose Internet Mail Extension).

UNIT III

(25%)

Software Standards: Introduction to Software Quality, Software Quality in Business Context, Managing Software Quality in an Organization, Software Quality Assurance(SQA) Plan – Overview, Purpose and Scope, SQA Management, Product Quality and Process Quality, Software Measurements and Metrics.

UNIT IV

(25%)

Software Quality Improvement Models: Basics of ISO 9001 and Software Capability Maturity Model, Comparison of SEI-CMM and ISO 9000 for Software, The Sixth Sigma Model, Managing the Software Process Improvement Project.

Reference Books:

1. Corporate Computer and Network Security by Raymond R. Panko: Pearson Publication.
2. Cryptography and Network Security Principle and Practices Third Edition by William Stallings: Pearson Publication.
3. Software Quality Assurance: Principles and Practices by Nina S. Godbole, Narosa Publication.
4. Software Quality: Producing Practical, Consistent Software by M Ben-Menachem, G S Marliss, Vikas Publication.
5. CMM in Practice by Pankaj Jalote, Pearson Education LPE.

Question Paper Scheme:

Section – I		Section – II	
Q.1 - Objective Type Unit I & II	(11) Marks	Q.4 - Objective Type Unit III & IV	(11) Marks
Q.2 - Unit-I OR Q.2 Unit-I	(12) Marks	Q.5 - Unit-III OR Q.5 Unit-III	(12) Marks
Q.3 - Unit-II OR Q.3 Unit-II	(12) Marks	Q.6 - Unit-IV OR Q.6 Unit-IV	(12) Marks

Question Paper Scheme:

Section – I

Q.1 - Objective Type Unit I & II (11) Marks

Q.2 - Unit-I **OR** Q.2 Unit-I (12) Marks

Q.3 - Unit-II **OR** Q.3 Unit-II(12) Marks

Section – II

Q.4 - Objective Type Unit III & IV(11) Marks

Q.5 - Unit-III **OR** Q.5 Unit-III(12) Marks

Q.6 - Unit-IV **OR** Q.6 Unit-IV (12) Marks