

ELECTIVE - 4 (GROUP D)

Written by Administrator
Sunday, 08 November 2009 05:31 -

Distributed System

Subject Code

:

06EC831

IA Marks

:

25

No. of Lecture Hrs/Week

:

04

Exam Hrs

Characterization of distributed systems: Introduction, Examples of distributed systems, Resource sharing and the web, Challenges.

6 Hours

Unit - 2 □□
□□

System models: Introduction, Architectural models, Fundamental modes.

6 Hours

Unit - 3 □□
□□

Interprocess communication: Introduction, The API for the internet protocols, External data representation and marshalling, Client-server communication, Group communication .

8 Hours

Unit - 4 □□
□□

Distributed objects and remote invocation: introduction, Communication between distributed objects, Remote procedure call, Events and notifications.

6 Hours

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Unit - 7 Distributed mutual exclusion, Elections, Multicast communication.

Coordination and Agreement: Distributed mutual exclusion, Elections, Multicast communication.

7 Hours

Unit - 8 Introduction, CORBA RMI, CORBA Services.

CORBA case study: Introduction, CORBA RMI, CORBA Services.

5 Hours

Text book:

1. **Distributes systems, concepts & design** – George Coulouris, Jean Dollimore, Tim Kindberg, “”, fourth edition, 2006. Pearson education.

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Reference book:

1. **Distributed system architecture, a middleware approach** – Arno puder, Kay Romer, Frank Pilhofer, Morgan Kaufmann publishers.

Network security

Subject Code

:

06EC832

IA Marks

:

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25

No. of Lecture Hrs/Week

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04

Exam Hrs

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03

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52

Exam Marks

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:

100

PART - A

Unit - 1 Services, mechanisms and attacks, The OSI security architecture, A model for network security.

Services, mechanisms and attacks, The OSI security architecture, A model for network security.

3 Hours

Unit - 2 Symmetric Ciphers: Symmetric Cipher Model, Substitution Techniques, Transposition Techniques, Simplified DES, Data encryption standard (DES), The strength of DES, Differential and Linear Cryptanalysis, Block Cipher Design Principles and Modes of Operation, Evaluation Criteria for Advanced Encryption Standard, The AES Cipher.

Symmetric Ciphers: Symmetric Cipher Model, Substitution Techniques, Transposition Techniques, Simplified DES, Data encryption standard (DES), The strength of DES, Differential and Linear Cryptanalysis, Block Cipher Design Principles and Modes of Operation, Evaluation Criteria for Advanced Encryption Standard, The AES Cipher.

9 Hours

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Unit - 3 Principles of Public-Key Cryptasystems, The RSA algorithm, Key Management, Diffie – Hellman Key Exchange, Elliptic Curve Arithmetic, Authentication functions, Hash Functions.

Principles of Public-Key Cryptasystems, The RSA algorithm, Key Management, Diffie – Hellman Key Exchange, Elliptic Curve Arithmetic, Authentication functions, Hash Functions.

8 Hours

Unit - 4 Digital signatures, Authentication Protocols, Digital Signature Standard.

Digital signatures, Authentication Protocols, Digital Signature Standard.

7 Hours

PART - B

Unit - 5 Web Security Consideration, Security socket layer (SSL) and Transport layer security, Secure Electronic Transaction.

Web Security Consideration, Security socket layer (SSL) and Transport layer security, Secure Electronic Transaction.

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Text book:

1. **Cryptography and Network Security** – William Stalling, Pearson Education, 2003

Reference books:

1. **Cryptography and Network Security** – Behrouz A. Forouzan, TMH, 2007
2. **Cryptography and network security** – Atul Kahate, , TMH, 2003

Internet engineering

Subject Code

:

	06EC833
IA Marks	

:

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25

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04

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03

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52

Exam Marks

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6 Hours

Text book:

1. **Communication protocol engineering**– P. Venkatarm and S. S. Manvi, PHI, 2004

References books:

1. **The Internet and its protocols** – Adrian Farrel, Elsevier, 2006.
2. **TCP/IP Protocol Stack** – B A Forouzan, TMH, 2006.

Biomedical Signal Processing

ELECTIVE - 4 (GROUP D)

Written by Administrator
Sunday, 08 November 2009 05:31 -

Subject Code

:

	06EC834
IA Marks	

:

25

No. of Lecture Hrs/ Week

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04

Exam Hrs

:

03

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Written by Administrator
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Electrocardiography: basic electrocardiography, ECG lead systems, and ECG signal characteristics.

6 Hours

Unit - 3

Basics of Digital Filtering: Digital filters, the Z-transform, elements of digital filter, types of digital filters, transfer function of a difference equation, the z-plane pole-zero plot, the rubber membrane concept.

6 Hours

Unit - 4

Adaptive Filters: Principal noise canceler model, 60-Hz adaptive canceling using a sine wave model, other applications of adaptive filtering.

8 Hours

Part - B

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Unit - 5

Signal Averaging: Basics of signal averaging, signal averaging as a digital filter, a typical averager, software for signal averaging, limitations of signal averaging.

7 Hours

Unit - 6

Data Reduction Techniques: Turning point algorithm, Fan algorithm, Huffman coding.

7 Hours

Unit - 7

ECG QRS Detection: Power spectrum of the ECG, bandpass filtering techniques, differentiation techniques, template matching techniques, a QRS detection algorithm.

6 Hours

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Unit - 8

ECG Analysis Systems: ECG interpretation, ST-segment analyzer, portable arrhythmia monitor.
VLSI in Digital signal Processing: Digital signal processors, high performance VLSI signal processing, VLSI applications in medicine, VLSI sensors for biomedical signals, VLSI tools, Choice of custom, ASIC, or off-the-shelf components.

6 Hours

Text Book:

1. **Biomedical digital Signal Processing** - Willis J. Tompkins, PHI, 2001.

Reference Book:

1. **Biomedical Signal Analysis** – Rangaraj M. Rangayyan John Wiley & Sons, Inc., 2002.

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High Performance Computer Networks

Subject Code

:

06EC835

IA Marks

:

25

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52

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100

PART - A

Unit - 1

History of Communication Networks, Networking principles, Future networks Internet, Pure TAM Network, Cable Network, and And Wireless.

6 Hours

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Unit - 2

Network services and Layered Architecture: Applications, Traffic characterization and quality of services, Network services, High performance networks, Network Elements., Layered applications, Open data network model, Network architectures, Network bottlenecks.

7 Hours

Unit - 3

Internet and TCP/IP Networks: Multicast IP, Mobile IP, TCP and UDP, Applications, FTP, SMTP. Internet success and limitations, Performance of TCP/IP Networks,

Performance of circuit switched networks.

7 Hours

Unit - 4

SONET, DWDM, FTH, DSL, Intelligent networks CATV.

6 Hours

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PART B

Unit - 5

ATM: Main features of ATM, Addressing, signaling and Routing, ATM header structure, ATM AAL, Internetworking with ATM.

7 Hours

Unit - 6

Wireless Networks: Link level design, Channel Access, Network design, Wireless networks today, Future networks, ad hoc networks,, High speed Digital cellular, HomeRF and Bluetooth.

7 Hours

Unit - 7

Reffrence Books:

1. **High-Speed Networks and Internet: Performance and Quality of service** – Willia
m Stallings
, , Pearson Edu., 2001.
2. **Building High-Speed Networks** – Tere Parnell, , TMGH, 2000.

Fuzzy Logic

Subject Code

:

ELECTIVE - 4 (GROUP D)

Written by Administrator

Sunday, 08 November 2009 05:31 -

06EC836

IA Marks

:

25

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04

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03

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1. **Fuzzy logic with Engineering applications** – Timothy J. Ross, McGraw-Hill, 1997.

Reference books:

1. **Nural networks and fuzzy systems: A dynamical system approach** – B. Kosko, , Pearson Edu. 1991.