

Code : 1G162

ANNAMACHARYA INSTITUTE OF TECHNOLOGY & SCIENCES :: RAJAMPET
(AUTONOMOUS)

III B.Tech. II Semester Supplementary Examinations December, 2014

Cryptography and Network Security
(CSE)

Time: 3 hours

Max Marks: 70

Answer any FIVE of the following
All questions carry equal marks (14 Marks each)

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1. a) Explain about a Model for Internetwork Security, Internet Standards and RFCs? 7M
b) Explain about TCP Session Hijacking and Man in the Middle attack? 7M
2. a) Explain about Conventional Encryption Principles? 7M
b) Explain about various approaches to Message Authentication? 7M
3. a) Explain in detail about Public Key Cryptography Principles? 7M
b) Explain about Authentication procedures of X.509? 7M
4. a) Explain about PGP Services and PGP Cryptographic functions? 7M
b) Explain in detail about S/MIME functionality and Messages? 7M
5. a) Explain about IP Security Architecture and Authentication Header? 7M
b) Explain about Internet Security Association and Key Management Protocol? 7M
6. a) Explain about Web Security Threats and Web Traffic Security Approaches? 7M
b) Explain about Transport Layer Security? 7M
7. a) Explain about SNMPV1 Community Facility? 7M
b) Explain in detail about Intruders? 7M
8. a) Explain in detail about Firewall design principles? 7M
b) Explain in detail about Data Access Control and Trusted Systems? 7M

III B.Tech. II Semester Supplementary Examinations December, 2014

Distributed Systems
(CSE)

Time: 3 hours

Max Marks: 70

Answer any FIVE of the following
All questions carry equal marks (14 Marks each)

1. a) What is Mobile Ubiquitous Computing? Explain. 6M
- b) Briefly explain an architectural model of distributed systems. 8M
2. a) List and explain different networking issues for distributed systems. 7M
- b) Discuss java implementation of RMI. 7M
3. a) How a new process creation can be done in distributed systems? Explain. 6M
- b) Explain the following :
i.Flat file service operations ii. Directory service operations 8M
4. a) What is name resolution? What are the different ways of resolving names? Explain. 7M
- b) Give a note on Napster file sharing system. 7M
5. a) Discuss different ways of synchronizing physical clocks. 7M
- b) Explain how mutual exclusion handled in distributed systems. 7M
6. a) Illustrate the use of exclusive locks with an example. 7M
- b) Describe validation of transaction. 7M
7. a) Discuss two -phase commit protocol for nested transactions. 7M
- b) Explain the need for transaction status and intentions list entries in a recovery file. 7M
- 8 Write in detail about various cryptographic algorithms. 288 14M

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Linux Programming
(Computer Science & Engineering)

Time: 3 hours

Max Marks: 70

Answer any FIVE of the following
All questions carry equal marks (14 Marks each)

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1. a) Discuss in detail about general purpose utilities with their syntax 8M
b) Explain about text processing utilities and backup utilities 6M
2. a) Describe about shell meta characters in brief. 7M
b) Write a shell script to find the factorial value of any number entered through the keyboard. 7M
3. a) Explain about UNIX file system in detail. 7M
b) Detail about file and record locking mechanisms. 7M
4. a) Explain about process related concepts and commands. 7M
b) What is a signal? Explain about any three signals with their syntax. 7M
5. a) What is IPC? Explain in detail about various IPC mechanism with relevant examples. 10M
b) Write a program for implementation of pipes. 4M
6. a) Explain about the concept of semaphores in detail. 7M
b) Discuss about UNIX System V APIs for shared memory 7M
7. a) What is the difference between a process and a thread? Explain about POSIX thread APIs and thread attributes. 8M
b) Write an example program that demonstrates the concept of threads. 6M
8. a) Describe about the various socket system calls. 7M
b) Write a client/server example to implement sockets. 7M

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Object Oriented Analysis and Design
(Common to CSE & IT)

Time: 3 hours

Max Marks: 70

Answer any FIVE of the following
All questions carry equal marks (14 Marks each)

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1. a) How system architecture plays a vital role in the development of software? Explain the Modeling System's architecture with diagram 7M
b) Why UML gained importance over DFD'S? What are the important building blocks of the UML? 7M
2. a) What are the important aspects to be considered to model the vocabulary of a system? 7M
b) Define class. Draw a class diagram for a retail system. 7M
3. Explain about: i.) Generalization ii.) Association iii.) Realization
iv.) Dependency (4x 3.5)=14M
4. a) How collaboration diagrams are useful in building a system and how it differ from sequence diagram. 7M
b) What are the important elements of sequence diagram? Draw a sequence diagram for Retail system. 7M
5. a) Define use case. What are the points to be considered to model the context of system using use case diagrams? 7M
b) Model a retail system using use case diagram 7M
6. a) Define a state. What are the important parts of a state? 7M
b) Draw the sequential sub states for an ATM machine. 7M
7. a) Explain the purpose of component diagram and also explain the distribution of artifacts using component diagram 7M
b) Explain about Deployment diagram components and How it is useful in the modeling of an Embedded system 7M
8. Draw Class & Sequence diagrams for library system. 14
