

Academic Year (2017-18)

Department of Information Technology (Under Graduate Course) B.Sc.IT

Question Bank

Semester – V

Network Security (USIT501)

Questions: Advanced Learner

1. Explain the following attacks: Masquerade, Replay, DOS.
2. What is Worm? What is the difference between Worm & Virus?
3. How does Simple Columnar technique work? Assume the plain text “ Network Security is easy subject” & generate the corresponding cipher text.
4. Short note on Vernam Cipher.
5. Explain the encryption & decryption in CTR mode.
6. How does DES works?
7. How is the combination of symmetric & asymmetric key together more efficient in security solution?
8. What is the concept of key Wrapping? How is it useful?
9. Describe the Blom`s Scheme.
10. Explain Diffie-Hellman Key distribution.

Questions: Slow Learner

1. What are the principles of IP security?
2. What is the concept of VPN?
3. What is the significance of an authentication token?
4. What are the 3 aspects of 3-factor authentication? What are the types of authentication token?
5. Why is offline e-money dangerous? Discuss double spending problem.
6. Short note on SMTP.
7. What is the role of CA & RA?
8. Name & explain the 4 steps on the creation of the digital certificate.
9. Short note on Asymmetric key Cryptography. If A wants to send a message securely to B, what would be the normal steps of communication.
10. What is the real crux of RSA?

Assignments

1. Short note on symmetric key cryptography.
2. What are the types of Cryptography algorithms? Explain.
3. Describe the lifetime phases of viruses. What is the principle of Trojan horse?
4. What is the difference between substitution cipher & transposition cipher.
5. Describe the TCP/IP communication model.

Asp.Net With C# (USIT502)

Questions: Advanced Learner

1. What is Common Language Specification (CLS)? Why is it so important?
2. What is Garbage Collector? How does it work?

3. Explain HashTable collection.
4. What are the different types of generic collections?
5. Where can we use Static Website?
6. Explain the need of Dynamic Content.
7. Write the ways and steps to connect SQL Server 2008 in Visual Studio 2008.
8. Explain any 6 SQL commands with their syntax and examples.
9. Write the details about providers in ASP .NET provider model.
10. State the ways of deployment of websites in ASP .NET.

Questions:Slow Learner

1. Write a short note on .NET framework.
2. List & Explain the Features of .NET 4.0 in detail.
3. What are the different types of collections in .NET?
4. Explain any two classes of System.Collections namespace.
5. What is web designing?
6. What are the types & benefits of a web application?
7. Explain SQL server 2008 with its features.
8. Give brief information about SQL server management studio.
9. Explain the main security aspects of ASP .NET in detail.
10. Explain the Provider Model of ASP .NET.

Assignments

1. Explain Client Application Development and Server Application Development.
2. Which interfaces are declared in System.Collections namespace?
3. Give the advantages of ASP.NET.
4. List & Explain the Data types supported in SQL Server 2008.
5. Explain in brief xCopy Deployment of website in Asp .NET.

Software Testing (USIT503)

Questions: Advanced Learner

1. Explain a 5 level structure of testing maturity models in detail. (OR) Give overview of Testing Maturity Model(TMM) and the test related activities that should be done for V-model architecture?
2. Explain software testing principles in detail.
3. Explain all the defects related to requirement specification, design, coding and testing phases.
4. Explain in detail the origin of defects
5. List the steps in developing test cases with a cause-and-effect graph
6. What are the contents of the defect/problem fix report?
7. List the application scope of adequacy criteria.
8. What are Loop testing strategies?
9. List the two major assumptions of Mutation testing
10. How to compute cyclomatic complexity? Explain each step.

Questions: Slow Learner

1. What is Software Testing?
2. Why is Software Testing Required?
3. What are the two main categories of software testing?
4. Explain the difference between alpha testing and beta testing.
5. What is the test case?
6. What is API testing?
7. What's the difference between verification and validation in testing?
8. What's the difference between a bug and a defect?
9. What are the phases involved in the Software Testing Life Cycle?
10. What is the difference between a bug, a defect and an error?

Assignments

1. Define process.
2. Define testing and debugging
3. Define Maturity goals
4. What is Defect Repository
5. List the classification of defects.

Advanced Java (USIT504)

Questions: Advanced Learner

1. What are different technologies provided by Java EE platform?
2. Explain different types of containers.
3. Write a note on the javax.servlet package and Servlet config.
4. What is JDBC? Explain architecture of JDBC in Detail?
5. What is Servlet and Why Servlets and What can Servlets do?
6. Explain servlet life cycle with diagram?
7. Explain HttpServletRequest and ServletResponse interface.
8. What is java enterprise Edition?
9. Explain Web Application Technologies in detail?
10. What is Glassfish Server? Explain its Features in detail?

Questions:Slow Learner

1. What is Requestdispatcher interface? How to obtain an object implementing it?
2. What are Cookies? Explain setting, sending and reading of Cookie in java Servlet?
3. Write a short note on Uploading file with java Servlet?
4. Explain the working of Non-Blocking I/O?
5. What is Session? Explain its types?
6. Explain lifecycle of Http Session?
7. Explain and list session management rules?
8. Explain the methods of request Dispatcher interface?
9. Difference between forward () and include () method?
10. Explain the life cycle of JSP with diagrams.

Assignments

1. Write a short note on the JSP page directive.

2. Write a short note on operators of EL.
3. Explain the life cycle of message driven beans?
4. What is EJB? Explain Benefits of Enterprise beans in detail?
5. What is the Relationship between JPA, ORM, Database and the application?

Linux Administration (USIT505)

Advanced Learner

1. Explain how to Configuring a Secure System
2. Explain GRUB.conf file in details
3. What are rc scripts, what these rc scripts contain & how they are executed?
4. What is DHCP ? How to configure DHCP explain in detail?
5. State & explain the steps of SAMBA Server & Client Configuration in detail.
6. Explain Configuring Linux Firewall packages.
7. Explain named.conf file of DNS in detail.
8. State & explain the steps of Configuring Sendmail Server & Client.
9. Explain steps of Configuring Apache for SSI & testing the configuration.
10. Explain different users of Linux, what are different commands can be executed by the Root user.

Slow Learner

1. Explain history of Unix and invention of Linux.
2. Explain Features of Linux in detail with different Linux Distributions.
3. Explain Backing Up and Restoring Files in Linux.
4. Explain the duties of System Administrator.
5. Explain Virtual File System (VFS) in brief.
6. Explain Limitations of NFS Server.
7. Explain Mail Transfer through SMTP Protocol.
8. Explain steps of Configuring IMAP4.
9. Write a short note on CGI Scripts.
10. Explain steps of Optimizing DNS Services

Assignment

1. Explain Monitoring and Tuning Performance in Linux.
2. Explain GRUB and LILO Boot Loaders.
3. How to install a boot loader?
4. What is cron? Explain how cron files are taking care of system tasks?
5. Compare inted and xinted services.