

TY- IT Sem-5  
(Network Sec.)

ATKT 12/4/18  
Q.P. Code :01760

[Time: 2½ Hours]

[ Marks:75]

Please check whether you have got the right question paper.

- N.B:
1. All questions are compulsory.
  2. Make suitable assumptions wherever necessary and state the assumptions made.
  3. Answers to the same question must be written together.
  4. Numbers to the right indicate marks.
  5. Draw neat labeled diagrams wherever necessary.
  6. Use of non-programmable calculators is allowed.

- Q.1 Attempt any two of the following: (10)
- a. Explain Phishing and Pharming attacks in detail.
  - b. Explain the principles of security.
  - c. List and explain types of criminal attacks.
  - d. Explain Hill cipher with example.
- Q.2 Attempt any two of the following: (10)
- a. List all the algorithm modes in cryptography. Explain any two in detail.
  - b. How DES works? Explain.
  - c. Explain in detail one round in IDEA.
  - d. What are the features of blowfish algorithm? Explain the steps in encryption process using blowfish algorithm.
- Q.3 Attempt any two of the following: (10)
- a. Compare symmetric and asymmetric key cryptography using their various characteristics.
  - b. How Hash-based Message authentication works? Explain.
  - c. Explain the concept of Digital Envelope.
  - d. How RSA can be used in digital signature? Explain in detail.
- Q.4 Attempt any two of the following: (10)
- a. What are the typical contents of a digital certificate?
  - b. Describe the role of CA in creation / revocation of Digital Certificate.
  - c. What is cross certification? Why is needed?
  - d. Draw and explain the format of CRL.
- Q.5 Attempt any two of the following: (10)
- a. List phases of SSL handshake. Explain any two phases in detail.
  - b. Draw and explain SET model.
  - c. Write a note on VPN.
  - d. Explain different firewall configurations.

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- Q.6 Attempt any two of the following: (10)
- What is authentication token? Explain its working.
  - Explain how Challenge / Response tokens works.
  - Explain the password based authentication and the problems associated with it.
  - Write a note on single sign on approaches.

- Q.7 Attempt any three of the following: (15)
- Explain Diffie Hellman Key exchange algorithm with example
  - Explain processes in each round of AES.
  - Explain the working of SHA (Secure Hash Algorithm).
  - Explain PKCS# 14 Pseudo-random Number Generation Standard.
  - Explain PGP operations.
  - Write a detailed note on biometric authentication.

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(5) Draw neat labeled diagrams wherever necessary.  
(6) Use of Non-programmable calculators is allowed.

1. Attempt any two of the following: 10  
a. Explain the role of CLR and CTS in .NET framework.  
b. What is namespace? Explain System namespace in brief.  
c. What are constructors? Explain the concept of static constructor.  
d. Explain different keywords used for interrupting loops.
2. Attempt any two of the following: 10  
a. Differentiate Private and Shared Assembly.  
b. Explain ASP.NET Page Lifecycle.  
c. What is delegate? Explain the process of delegate implementation.  
d. Explain the different selectors in CSS in ASP.NET?
3. Attempt any two of the following: 10  
a. What is post-back event? Explain with suitable example.  
b. Name the ASP.NET application file that is used to serve application-level and session-level events and explain the same in detail.  
c. Give comparison between checkbox and radio button control.  
d. Explain Request and Response Objects in brief.
4. Attempt any two of the following: 10  
a. Explain CompareValidator and RangeValidator with its properties.  
b. What are the different techniques used in ASP.NET to send data from one Webform to another? Explain any one technique in detail.  
c. Explain Content Page and Master Page with suitable example.  
d. Explain the following properties in SiteMapPath control:  
i) PathSeparator  
ii) PathDirection  
iii) ParentLevel
5. Attempt any two of the following: 10  
a. Explain ADO.NET object model with suitable diagram.  
b. What is role of the following classes when using SQL SERVER database in ASP.NET applications?  
i) SqlConnection  
ii) SqlCommand  
iii) SqlParameter  
Also mention the namespace to be included to use these classes.  
c. Explain Authentication and Authorization with suitable example.  
d. Explain DataPager Control. Write the steps for implementing.

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6. Attempt **any two** of the following: 10
- a. What is LINQ? Explain in brief LINQ to object.
  - b. What is AJAX? What are the advantages of AJAX?
  - c. Explain any 5 jQuery selectors.
  - d. Write an JQuery application code for hiding "I Love my India" on click button.

7. Attempt **any three** of the following: 15
- a. Differentiate Abstract classes and Interfaces in C#?
  - b. Explain different types of CSS in ASP.NET.
  - c. Explain inline code and code behind.
  - d. Explain the role of TreeView control in ASP.NET applications.
  - e. Differentiate DataReader and DataAdapter in ASP.NET.
  - f. Explain the syntax and purpose of Document Ready Function.
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 (4) Numbers to the right indicate marks.  
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 (6) Use of Non-programmable calculators is allowed.

1. Attempt any two of the following: 10  
 a. Define Software Testing. What are the viewpoints of Quality and how they are fulfilled by testing?  
 b. Explain the fundamental principles in testing.  
 c. Define the following: test basis, test case, exit criteria, test condition and testware.  
 d. What is the main reason for poor relationships between the test team and developers? How it can be tackled?
2. Attempt any two of the following: 10  
 a. Explain V Model in detail.  
 b. Discuss Impact analysis and regression testing with respect to Maintenance testing.  
 c. Define the following: Verification, Validation, Stubs, Drivers and Beta Testing.  
 d. What are the different levels of testing? Explain the testing level that is concerned with the behavior of the whole system/product as defined by the scope of a development project or product.
3. Attempt any two of the following: 10  
 a. Explain the phases of a Formal review.  
 b. Write a short note on Static Analysis by tools.  
 c. Define the following: entry criteria, scribe, cyclomatic complexity, data flow and control flow.  
 d. Define Static Testing. What is its significance? List the software work products that can be examined by different static techniques.
4. Attempt any two of the following: 10  
 a. Describe the concept and importance of code coverage with help of an example.  
 b. Explain the technique in which the test cases are based on intuition, experience and knowledge about common defects.  
 c. Define the following: test cases, test condition, test data, test script and traceability.  
 d. A website shopping basket starts out as empty. As purchases are selected, they are added to the shopping basket. Items can also be removed from the shopping basket. When the customer decides to check out, a summary of the items in the basket and the total cost are shown, for the customer to say whether this is OK or not. If the contents and price are OK, then you leave the summary display and go to the payment system. Otherwise you go back to shopping (so you can remove items if you want).  
 i. Produce a state diagram showing the different states and transitions. Define a test, in terms of the sequence of states, to cover all transitions.  
 ii. Produce a state table.

[TURN OVER]

5. Attempt ***any two*** of the following: 10
- a. Write a short note on Test monitoring.
  - b. What is Product Risk and Project Risk? For any risk, product or project, discuss the four typical options to handle them.
  - c. Define the following: test control, test coverage, test monitoring, configuration management and version control.
  - d. "Incident reports move through a series of clearly identified states after being reported.", Discuss these states in the sequence of their occurrence.
6. Attempt ***any two*** of the following: 10
- a. What are the potential benefits and risks of using tools.
  - b. Explain Test comparators.
  - c. Define the following: debugging tool, data-driven script, keyword-driven script, screen scraper and web spider.
  - d. Discuss the features provided by test management tools.
7. Attempt ***any three*** of the following: 15
- a. List all the activities within the fundamental test process. Explain any one activity in detail.
  - b. Explain the four software test types.
  - c. State and explain briefly types of review.
  - d. Explain Decision table testing with help of an example
  - e. Discuss the factors to be considered in taking decisions regarding 'entry criteria' and 'exit criteria.'
  - f. Write a short note on pilot tool project.
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TY-IT sem-5

Adv. JAVA

ATKT 18/4/18

Q.P. Code :01757

[Time: 2 $\frac{1}{2}$  Hours]

[Marks:75]

Please check whether you have got the right question paper.

- N.B:
1. **All** questions are **compulsory**.
  2. Make **suitable assumptions** wherever necessary and **state the assumptions** made.
  3. Answers to the **same question** must be **written together**.
  4. Numbers to the **right** indicate **marks**.
  5. Draw **neat labeled diagrams** wherever **necessary**.
  6. Use of **Non-programmable** calculator is **allowed**.

Q.1 Attempt **any two** of the following: (10)

- a. What do you understand by anonymous inner class? Explain with the help of a suitable example.
- b. Explain the various Layout Managers available in AWT
- c. How does AWT create Radio Buttons? Explain with syntax and code specification.
- d. Write a program demonstrating the use of ItemListener.

Q.2 Attempt **any two** of the following: (10)

- a. Explain Root Pane, Glass Pane, Layered Pane, Content Pane and Desktop Pane.
- b. What is the purpose of JComboBox? Explain with the help of an example.
- c. Write a java swing program that creates a hierarchical tree data structure.
- d. What is the difference between AWT and Swing?

Q.3 Attempt **any two** of the following: (10)

- a. What is CGI? What are its disadvantages?
- b. Write short note on Servlet and ServletConfig by explaining its methods and Constructors.
- c. Write a servlet program that will read a string from user. If the string is 'University of Mumbai' then greet the user otherwise display error message.
- d. Explain the following methods of ServletRequest interface of servlet API
  1. getParameter
  2. getServerName
  3. setAttribute
  4. getAttributeNames
  5. getParameterValue

Q.4 Attempt **any two** of the following: (10)

- a. List the implicit objects of JSP. Explain any 4 of them in detail.
- b. Write JSP Code that will display factorial of numbers from 1 to 20.
- c. What is scrollable ResultSet in JDBC? Explain.
- d. Explain the preparedStatement with suitable example.

Q.5 Attempt **any two** of the following: (10)

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- a. Explain in details phases of JSF Life cycle.
- b. Explain with suitable example <navigation-rule> element of faces-config.xml file of JSF.
- c. List and explain different types of Enterprise Beans.
- d. Explain the benefits of EJB.

**Q.6** Attempt any two of the following:

(10)

- a. What is the importance of hibernate mapping file? Explain with suitable example.
- b. Write a short note on Interceptors in struts.
- c. Explain in detail about core components of Struts framework.
- d. Explain Filter dispatcher and any two Actions components used by struts.

**Q.7** Attempt any three of the following:

(15)

- a. Explain the Event Delegation Model.
- b. Write a java program using Split pane to demonstrate that a screen divided in two parts. One part contains the examination seat number of student. When user selects the exam seat number, mark sheet of the student should get displayed in another pane.
- c. Explain Servlet life cycle with help of suitable diagram.
- d. Write short note on JDBC Driver. Explain its types and advantages.
- e. List and explain elements of JSF.
- f. What is OGNL in struts? State and explain the Execution Flow of Value Stack.

TY-IT Sem-5  
(LINUX)

ATKT 18/4/2018

Q.P. Code : 23214

(Time: 2  $\frac{1}{2}$  hours)

Total Marks: 75

- N. B.: (1) All questions are compulsory.  
(2) Make suitable assumptions wherever necessary and state the assumptions made.  
(3) Answers to the same question must be written together.  
(4) Numbers to the right indicate marks.  
(5) Draw neat labeled diagrams wherever necessary.  
(6) Use of Non-programmable calculators is allowed.

I. Answer any two of the following: 10

- Write a short note on Linux Distribution and GNU with example.
- What is rcscrip? How can rcscrip be managed by using chkconfig? Explain.
- Explain the stages of Linux boot process in detail.
- List and explain various Memory File System and its uses.

II. Answer any two of the following: 10

- Explain the following files in /etc/sysconfig/
  - irda
  - hwconf
  - apmd
  - kudzu
  - xinetd
- What is DHCP? How can you configure your machine as a DHCP server?
- Explain different NFS server Commands with syntax and example.
- Explain how to setup NIC (Network Interface Card) with the help of:
  - Configuring the network card
  - Configuring the internal network

III. Answer any two of the following: 10

- Explain [global] section of the file /etc/samba/smb.conf with different options.
- What is server message block protocol? Explain smbclient and smbmount commands.
- What are the different tasks performed by user to configure Time Server?
- Explain steps required to configure caching proxy server.

IV. Answer any two of the following: 10

- How is xinetd server configured? Explain.
- Explain the use of rsync, finger, scp, rlogin, ssh services.
- What is DNS? Explain the several types of domains.
- Explain the Zone statement of named.conf file with different options.

V. Answer any two of the following: 10

- What is vsftpd? Explain the advantages of vsftpd.
- How to configure user level FTP access?
- What are the different E-mail programs? Explain with suitable diagram.
- Write a brief note on sendmail and postfix.

[TURN OVER]

- VI. Answer any two of the following: 10
- a. What is SSL? how user can create secure server with SSL?
  - b. How can CGI be enabled with Apache? Explain.
  - c. How to determine the content of rpm? Explain with example.
  - d. Which command is used to change the expiration policy for user's password? Explain with suitable example.

- VII. Answer three two of the following: 15
- a. List and explain all duties of Linux system administrator.
  - b. Explain the steps used to setup IP address, Hostname and DNS Name Resolution.
  - c. What is Samba? Explain printers and homes section of samba configuration file.
  - d. List and explain the protocols which can be used on the Linux machine as a server.
  - e. How to configure /etc/vsftpd/vsftpd.conf? Explain advantages of FTP server configuration.
  - f. Write a short note on
    - i. Useradd
    - ii. Chsh
    - iii. Who
    - iv. sudo
    - v. /etc/shadow
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