SARDAR PATEL UNIVERSITY

[A-२२]

MSc. IT (Information Technology) (Integrated), 7th Semester (CBCS)

Monday , Date: 24th October, 2016
Session : Evening   Time : 02:00 P.M. to 05:00 P.M.

Course Code: PS07CIIT04   **Total Marks: 70**

Course Title : Advanced Computer Networking

Q1.   Multiple Choice Questions.   **[08]**

1. The count-to-infinity is a problem of _____ routing algorithm.
   - a. shortest path
   - b. distance vector
   - c. link state
   - d. All of the above

2. As a direct consequence of Optimality principle _____ denotes optimal routes from all sources to a given destination.
   - a. packet tree
   - b. sink tree
   - c. link tree
   - d. optimal tree

3. Leaky bucket technique is related to _____.
   - a. Error correction
   - b. Flow control
   - c. Error detection
   - d. Congestion control

4. Quality of service refers to _____.
   - a. Privacy rules
   - b. Flow control
   - c. Addressing issues
   - d. Real time delivery constraints

5. _____ language is used to interact with remote database.
   - a. VB
   - b. Java
   - c. HTML
   - d. PHP

6. SMTP sends e-mails via port number _____.
   - a. 21
   - b. 25
   - c. 80
   - d. 45

7. _____ is a computer that is always connected to the internet and translates domain names into IP addresses and vice-versa.
   - a. Network Server
   - b. Database Server
   - c. Name Server
   - d. File Server

8. Cryptanalysis is the art of _____ ciphers.
   - a. devising
   - b. breaking
   - c. collecting
   - d. None of these

Q2.

Answer the following short questions (Attempt any SEVEN) [14]

1. State the optimality principle.
2. State major classes of routing algorithms. Explain any one.
3. Mention any 4 congestion control techniques.
4. State advantages of concatenated virtual circuits.
5. State various causes for the need of fragmentation.
6. What is the use of style sheets?
7. What are zones?
8. Discuss Kerckhoff's principle in brief.
9. Draw encryption model of cryptography (Symmetric-Key Cipher).

Q3.a. Explain Shortest path routing with example. [6]

Q3.b. Explain Routing in AdHoc Networks in brief. [6]

OR

Q3.b. Write a note on congestion prevention policies. [6]

Q4.a. List and explain various issues on which networks differs. [6]

Q4.b. Explain fragmentation in detail with its types. [6]

OR

Q4.b. Write short note on tunneling. [6]

Q5.a. Discuss DNS in detail along with its uses. [6]

Q5.b. List the steps performed at server side to access a file stored on modern web servers. [6]

OR

Q5.b. Write a note on E-mail architecture and services. [6]

Q6.a. Explain Transposition cipher techniques with example. [6]

Q6.b. Explain working of RSA Algorithm in detail. Find cipher for given plain text M = "S", p=3 and q=11. [6]

OR

Q6.b. Explain DES algorithm in detail. [6]