

BCA (REVISED)

Term-End Examination

June, 2013

BCS-041 : FUNDAMENTAL OF COMPUTER
NETWORKS

Time : 3 hours

Maximum Marks : 100

Note : Question number 1 is compulsory. Answer any three question from the rest.

1. (a) Write any four differences between analog and digital systems. 4
- (b) Justify the statement "Slotted ALOHA achieves double efficiency than pure ALOHA". 6
- (c) How is CRC code used for error detection in digital networks ? Give an example to illustrate your answer. 5
- (d) Compare and contrast between "Peer to Peer" and "Client Server" Networking. 5
- (e) Explain the count to infinity problem with help of an example. 5
- (f) Define silly window syndrome at transport layer ? Explain. 5
- (g) Write any five advantages of frame relay over X.25 architecture. 5
- (h) Differentiate between public-key and private-key cryptography. 5

2. (a) What is MD5 ? Write the steps for MD5 algorithm. 10
- (b) Compare 1G, 2G and 3G wireless generations based on following criteria : 10
- (i) Communication method
 - (ii) Modulation Technique
 - (iii) Services
 - (iv) Channel Assignment
3. (a) Discuss distance vector routing with help of a subnet topology. Discuss what are different matrices used in the distance vector routing algorithm. 10
- (b) What are the various methods in HTTP ? Explain the use of any four methods. 10
4. (a) Write the role of Data link layer in OSI model. Explain the services and functions provided by Data link layer. Also, explain the importance of its sublayers. 10
- (b) Explain the importance and functions of layer 2 and layer 3 switches. Also, write advantages and disadvantages of each. 10
5. Write a short notes on the following : 20
- (a) RSA algorithm
 - (b) IP address classes
 - (c) Fiber optic cables
 - (d) Time Division Multiplexing