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Code No. : 15204 S

VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD
B.E. (CSE: CBCS) V-Semester Supplementary Examinations, May/June-2019

Computer Networks

Time: 3 hours

Max. Marks: 70

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Part-A (10 × 2 = 20 Marks)

1. How are the layers of OSI and Internet model related?
2. Identify the various transmission media for wireless medium along with its type of propagation.
3. List the uses of bridges.
4. The efficiency of Pure Aloha is improved over Slotted Aloha. Justify your answer.
5. What are the design issues in network layer?
6. What is Multicasting and Broadcasting? Which IP address is used in the internet to perform Broadcasting?
7. Mention the features of TCP.
8. Illustrate the open loop solutions for avoiding congestion in data link layer.
9. Differentiate between primary and secondary server.
10. In asymmetric key cryptography, can Alice use the same key to communicate with Bob and John? Justify.

Part-B (5 × 10 = 50 Marks)

- 11.a) Illustrate with a neat diagram the TCP/IP reference model. [6]
- b) Differentiate guided and unguided transmission media. [4]
- 12.a) Explain Go back N algorithm with a neat diagram. [5]
- b) Explain how random access is achieved using CSMA technique. [5]
- 13.a) Draw a subnet graph and develop the routing table using the distance vector routing algorithm. State the drawbacks of distance vector algorithm. [6]
- b) Which protocol is used to map the logical addresses to the physical addresses? Explain with an example. [4]
- 14.a) What is TCP? With a neat diagram describe the header format in detail. [5]
- b) How does leaky bucket algorithm improve the Quality of service in TCP? [5]
- 15.a) Define DNS? What resource records are associated with DNS? Explain [5]
- b) What are the various public key distribution techniques? Select the most secured method among them. [5]
- 16.a) Explain error detection and correction techniques used in the Data Link Layer. [6]
- b) Explain about various networking devices used in each layer of TCP/IP protocol stack. [4]
17. Answer any *two* of the following:
 - a) State the advantages of IPv6 over IPv4 protocol [5]
 - b) Describe the TCP sliding window algorithm for flow control. [5]
 - c) Classify the Cipher block modes of DES. How can block cipher mode of DES modified to operate in stream cipher mode of operation? [5]

