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BMS College of Engineering, Bangalore-560019

(Autonomous Institute, Affiliated to VTU, Belgaum)

June 2016 Semester End Make Up Examinations

Course: COMPUTER NETWORKS **Duration: 3 Hours**
Course Code: 10CI6GCCON **Max Marks: 100**
Date: 07.06.2016

Instructions: Answer FIVE FULL questions, choosing one from each unit.

UNIT-1

1. a) Explain Virtual circuit packet switching with delays . **08**
   b) Explain the structure of a packet switch. **04**
   c) Differentiate between **08**
      i) Source routing versus Hop-by-hop routing
      ii) Link state routing versus distance-vector routing

UNIT-2

2. a) Explain TCP/IP Architecture. **10**
   b) Explain Mobile IP along with its architecture. **10**

OR

3. a) Differentiate between leaky bucket Traffic Shaper and Token bucket Traffic Shaper. **06**
   b) Describe the format of IPV6 basic header and also the extension headers. **10**
   c) Explain Traffic Management at flow aggregate level. **04**

UNIT-3

4. a) Explain diffie-hellman key exchange algorithm with an example. **06**
   b) Discuss the differentiated services of QoS approach. **08**
   c) Categorize the functionalities performed by Network management system. **06**

OR

5. a) Explain in detail the leaky bucket traffic shaping algorithm. **06**
   b) Explain VPN and its types based on tunneling **08**
   c) Apply RSA algorithm and do the following: **06**
      i) Encrypt p = 7, q = 13, e = 5 and M = 10.
      ii) Find the corresponding d.
      iii) Decrypt the ciphertext.

UNIT-4

6. a) Design a Huffmann encoder for a source with an alphabet $\{a_0,a_1,a_2,a_3,a_4,a_5,a_6\}$ and with corresponding probabilities {0.55, 0.10, 0.05, 0.14, 0.06, 0.08, 0.02} **06**

   b) Sketch the header format of the Real-time Transport protocol and discuss the various fields. **06**

   c) Discuss how stored multimedia content is distributed using CDNs. **08**

UNIT-5

7. a) Explain DSDV packet process algorithm. **06**

   b) Explain different types of attacks on Ad-hoc networks. **04**

   c) Explain the different units in wireless sensor node. **06**

   d) Explain functionality of Zigbee Technology. **04**

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