R16

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech IV Year I Semester Examinations, December - 2019
COMPUTER NETWORKS
(Electronics and Communication Engineering)

Time: 3 Hours   Max. Marks: 75

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A

(25 Marks)

1.a) What is difference between internet and intranet? [2]
  b) Define computer network. How is a computer network different from other types of networks? [3]
  c) Write Ethernet cabling standards. [2]
  d) List the carrier sense protocols. [3]
  e) Define broadcasting. [2]
  f) What is congestion? State general principles of congestion control. [3]
  g) List the transport service primitives. [2]
  h) What are the fields that are present in the UDP header? [3]
  i) Define firewall. [2]
  j) What are the three aspects of security? [3]

PART – B

(50 Marks)

2. With a neat diagram, explain the functionality of layers, protocols and interfaces of OSI Model. [10]

OR

3. Explain in detail about coaxial cable with neat sketch. [10]

4. Explain the operation of ALOHA system. Derive the expression for its channel efficiency. [10]

OR

5. Explain in detail about the sliding window protocol. [10]

6. Briefly explain the routing in internet by using the BGP protocol. [10]

OR

7. How routes are determined by exchange of distance vectors. What is the main problem with distance vector routing algorithm? What are the solutions for it? Illustrate with an example. [10]

8. Explain the frame format of TCP header and compare it with UDP protocol, and its design issues. [10]

OR

9. Discuss in detail about the elements of transport layer. [10]

10. Write a short note on the following:
    a) Bluetooth
    b) Zigbee [4+6]

OR

11. a) Explain in detail about IP security.
    b) Discuss in detail about SSL. [4+6]

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