Code No: 137BK

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]

---ooOoo---