

APJ Abdul Kalam Technological University

Ernakulam II Cluster

Second Semester M.Tech Degree Examination May 2017

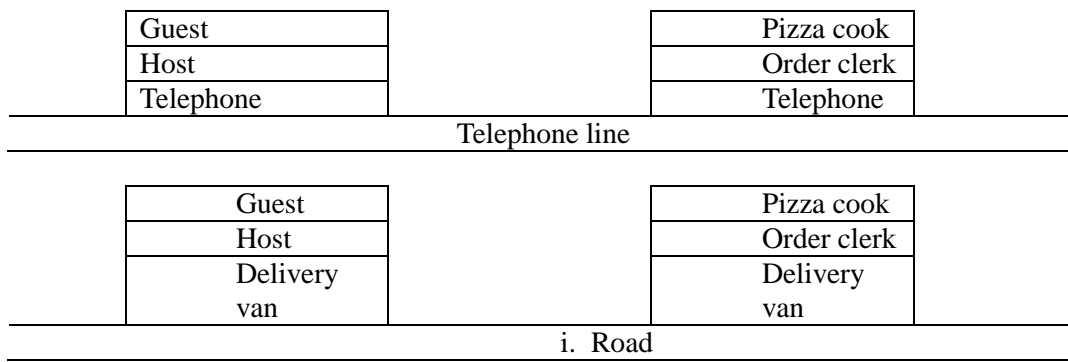
05CS6004- ADVANCED COMUTER NETWORKS

Time: 3 hrs

Max Marks: 60

1. a) Describe the ordering and delivery of a pizza, indicating the interactions at each level using the layer model given in the figure. [Hint: Using TCP/IP Architecture.]

(8 Marks)



- b) The digital signal 10110011 is transmitted and received as 10111111. Discuss the various impairments that caused bit errors in the signal.

(4 Marks)

2. An ISP is granted a block of addresses starting with 190.100.0.0/16. The ISP needs to distribute these addresses to three groups of customers as follows:

- The first group has 64 customers: each needs approximately 256 addresses.
- The second group has 128 customers; each needs approximately 128 addresses.
- The third group has 128 customers; each needs approximately 64 addresses.

- a) Design the subblocks and give the slash notation for each subblock. Find out how many addresses are still available after these allocations.

(7 Marks)

- b) Discuss the working of various connecting devices used in network architecture.

(5 Marks)

3. A TCP connection is in ESTABLISHED state. The following events occur one after another.

- A FIN segment is received
- The application sends a “close” message

a) What is the state of the connection after each event. What is the action after each event?

(9 Marks)

b) Compare and contrast stop and wait and sliding window protocol

(9 Marks)

OR

4. a) Explain connection establishment and connection release in stream control transmission protocol with diagrammatic illustration. (10 Marks)

b) Compare the features of SCTP with TCP and UDP.

(8 Marks)

5. a) Why do we need a DNS system, when we can directly use an IP address?

(10 Marks)

b) Write a note on DHCP operation?

(8 Marks)

OR

6. a) Discriminate RTP and RTCP?

(10 Marks)

b) Elaborate on Session Initiation Protocol(SIP) and H.323

(8 Marks)