

Code No: **R32041****R10****Set No. 1****III B.Tech II Semester Supplementary Examinations, April/May - 2019****COMPUTER NETWORKS**

(Electronics and Communication Engineering)

Time: 3 hours**Max. Marks: 75****Answer any FIVE Questions**
All Questions carry equal marks

- 1 a) Differentiate between OSI and TCP/IP reference models. [8M]
b) What is network? Explain about various network topologies. [7M]
- 2 a) Differentiate between circuit switching and packet switching. [7M]
b) A light signal is travelling through a fiber. What is the delay in the signal if the length of the fiber-optic cable is 10m, 100m and 1Km (assume a propagation speed of 2×10^8 m)? [8M]
- 3 a) How is the simple parity check related to the two-dimensional parity check? Explain. [8M]
b) Design a bidirectional algorithm for the Stop-and-Wait ARQ protocol using piggybacking. Note that both parties need to use the same algorithm. [7M]
- 4 a) Discuss the Spanning Tree Bridges. [8M]
b) Explain about Persistent and Non Persistent CSMA. [7M]
- 5 a) Compare the virtual circuit with datagram subnets. [7M]
b) How do you implement hierarchical routing? Explain. [8M]
- 6 a) What is Broadcasting? Explain about Reverse path forwarding With an example. [8M]
b) How is congestion prevented in different layers? Explain. [7M]
- 7 a) Draw the structure of the ATM Adaptation Layer and explain in detail. [8M]
b) Give the format of UDP segment and TCP segment? Explain when UDP is preferred to TCP? [7M]
- 8 a) Discuss about three different types of Web documents. [8M]
b) Describe the message format and the underlying protocol involved in the working of electronic mail. [7M]
