Code: 17D06102

M.Tech I Semester Regular & Supplementary Examinations January/February 2019

ADVANCED COMPUTER NETWORKS

(Digital Systems & Computer Electronics)

(For students admitted in 2017 & 2018 only)

Time: 3 hours Max. Marks: 60

Answer all the questions

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1 Explain circuit switched and packet switched network. Explain in what way packet loss and delay will affect the switched networks.

OR

2 Draw the OSI network architecture and explain the functionalities of each layer in detail.

3 (a) A block of 32 bits has to be transmitted. Discuss how the thirty two bit block is transmitted to the receiver using longitudinal redundancy check.

(b) The message 11001001 is to be transmitted using CRC error detection algorithm. Assuming the CRC polynomial to be $x^3 + 1$, determine the message that should be transmitted. If the second left most bit is corrupted, show that it is detected by the receiver.

OR

4 Distinguish between point to point links and multi-point links with relevant diagram.

5 Discuss in detail about the various aspects of IPV6. Also list the differences between IPV6 and IPV4.

OR

6 (a) Explain in detail about reliable byte stream.

(b) Draw and explain TCP state transition diagram in detail.

7 Explain the MAC layer function of IEEE 802.11 and how collision is handled in Wi-Fi.

OR

8 What is optical router? Explain about the optical IP switching mechanisms in detail.

9 Explain any two routing protocols in Wireless Adhoc Network with suitable diagram.

OR

10 Describe the architecture of wireless sensor network.

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