(Following Paper ID and Roll No. to be filled in your Answer Books)

PAPER ID : ME24

Roll No. | | | | | | | | | | |

M. TECH. (Sem.II)

THEORY EXAMINATION 2015-16

ADVANCED HIGH-SPEED & COMPUTER NETWORKS

Time : 3 Hours Total Marks : 100

Note: Attempt All Questions. All Questions carry equal marks:-

1. Attempt any four of the following:- (5×4=20)

   (a) What are the main reasons for using layered protocol? Explain.

   (b) List the two ways in which the OSI reference model and TCP/IP model are same, and list two ways in which they differ.

   (c) Differentiate between TCP and UDP.

   (d) An AAL1 layer receives data at 2Mbps. How many cells are created per second by ATM layer?

   (e) What is the size of ARP packet when the protocol is IP and the hardware is Ethernet?

(f) What is the minimum size of an Ethernet frame that carries an IP packet which in turn carries ICMP packet? What is the maximum size?

2. Attempt any two of the following:- (10×2=20)

(a) Discuss the Frame Relay physical layer. Why is Frame Relay a better solution for connecting LANs than T1 lines?

(b) Describe what properties do the WDMA and GSM channel access protocols have in common.

(c) Which wireless protocol would you expect to provide a better foundation for a packet-based telephony service: 802.11 (Wi-Fi) or 802.16 (WiMAX)? Why?

3. Attempt any two of the following:- (10×2=20)

(a) What are the two categories of Wireless Sensor Network? Discuss distributed WSN applications with example.

(b) Explain hardware and software components of WNs with suitable diagram.

(c) Discuss MAC protocols for Wireless Sensor Network in brief.

4. Attempt any two of the following:- (10×2=20)

(a) What is difference between DSDV and AODV protocols? Discuss topology based Global State Routing protocol.

(b) Explain IP Multicast architecture with IP Multicast service model in brief.

(c) Why intra-domain routing won't work on internet? How do we pick a "global" metric?

5. Attempt any two of the following:- (10×2=20)

(a) What is congestion? Describe the two approaches for congestion handling.

(b) What is QOS? Discuss basic components in QOS architecture.

(c) Write notes on congestion management tools in QOS.

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