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Question Paper Code : 20431

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2018.

Eighth Semester

Electronics and Communication Engineering

EC 6802 — WIRELESS NETWORKS

(Regulations 2013)

(Also common to PTEC 6802 – Wireless Networks for B.E. Part-Time
Seventh Semester – Electronics and Communication Engineering
Regulations 2014)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is the principle behind infrared technology? What are the advantages and disadvantages of infrared technology?
2. What is WIMAX? Mention its features.
3. Define SIP. Write the functions of SIP.
4. Differentiate proactive and reactive routing protocols. Write examples for each.
5. What is I-TCP? List its merits and demerits.
6. What is Congestion Avoidance algorithm?
7. Name the functions of Radio Network Control (RNC).
8. List the functions provided by 3G-GGSN.
9. What is meant by Multi Carrier Modulation (MCM)? Mention its merits and demerits.
10. What are the techniques to improve network survivability in different layers? Name the challenges faced by 4G.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Compare Infra Red vs Radio Transmission techniques. (8)
(ii) Elucidate the advantages of WLAN techniques. (8)

Or

- (b) Draw the protocol architecture of WLAN (802.11). Explain the physical layer and MAC management layer of 802.11. (16)

12. (a) (i) Imagine the following scenario. A Japanese and a German meet at a conference on Hawaii. Both want to use their laptops for exchanging data, both run mobile IP for mobility support. Explain the optimizations used in this mobile IP Networks. (8)
(ii) Discuss on the Entities and terminology of mobile IP networks. (8)

Or

- (b) Explain the Destination Sequence Distance Vector routing protocol. Mention its features. (16)

13. (a) (i) How does mobile TCP play an important role in Mobile transport layer? Discuss in detail. (8)
(ii) Explain any two classical TCP improvements for mobility. (8)

Or

- (b) Explain in detail about the TCP over 3G wireless networks. (16)

14. (a) With neat diagram, explain the Reference Architecture of UMTS. (16)

Or

- (b) Describe Channel Structure in UMTS Terrestrial Radio. (16)

15. (a) (i) What is 4G? Compare the key parameters of 4G with 3G. (10)
(ii) Write a note on Cognitive Radio. (6)

Or

- (b) (i) What is a Multi-Input Multi-Output (MIMO) system? Explain. (6)
(ii) With neat block diagram explain the OFDM Transmitter and Receiver. (10)