KUMARAGURU
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Register Number: …………………….

B.E DEGREE EXAMINATIONS: NOV/DEC 2014

(Regulation 2009)

Seventh Semester

COMPUTER SCIENCE & ENGINEERING

ITY107: Mobile Communications

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. The frequencies typically used for directed microwave links and fixed satellite services are in -------- range.

   a) SHF
   b) VLF
   c) HF
   d) MF

2. --------- combine multiple antenna elements with signal processing to optimize the reception pattern.

   a) Isotropic radiator
   b) Directional antenna
   c) Sectorized antenna
   d) Smart antenna

3. The interface used for connecting a mobile station to the GSM network is

   a) A_{bis}
   b) U_m
   c) A
   d) SS_7

4. All device identifications registered for a GSM network are stored in

   a) EIR
   b) HLR
   c) BTS
   d) AUC

5. ------- contains a timestamp and information for power management and roaming.

   a) Adhoc network
   b) Beacon

c) Access point d) Polling

6. The LANs with a limited coverage and without any infrastructure are called

   a) mobile networks b) Ad-hoc piconets

   c) MANs d) WANs

7. The protocol used in Destination sequence distance vector routing is

   a) TCP b) Demand type protocol

   c) IP d) Table driven routing protocol

8. MANET protocols are compatible with

   a) Routing b) Network dynamics

   c) Security d) Fixed networks

9. The error handling capability for Wireless datagram protocol is provided by

   a) UDP b) WAP

   c) IP d) WCMP

10. Mobile TCP needs -------- to implement fair sharing over the wireless link.

    a) Home agent b) Bandwidth manager

    c) Mobile node d) Foreign agent

PART B (10 x 2 = 20 Marks)

11. What is the function of antennas? List its types.

12. List the advantages and disadvantages of space division multiple access.

13. List the new network elements introduced in the GPRS architecture.

14. What do you mean by FAMA in satellite networks?

15. Compare the features of infrastructure and ad hoc networks.

16. Write any four unique features about Bluetooth.

17. List the goals of mobile IP.

18. Compare DSDV and DSR routing protocols.

19. What is meant by snooping TCP?

20. Give the influence of mobility on TCP mechanisms.

PART C (5 x 14 = 70 Marks)

21. a) Explain about CDMA with relevant coding examples.

(OR)

b) What is spread spectrum technique? Explain the types.

22. a) Explain the architecture and handover operation of GSM system.

(OR)

b) (i) Discuss about the features of Digital video broadcasting. (8)

   (ii) Elaborate on the functions of Multimedia object transfer protocol. (6)

23. a) What is HIPERLAN? Describe its function in detail.

(OR)

b) Explain the different ways of accessing MAC layer of IEEE 802.11.

24. a) Describe about Registration and Encapsulation with reference to mobile IP.

(OR)

b) (i) Enumerate on the features of Dynamic host configuration protocol. (6)

   (ii) Give an overview of DSR routing protocol. (8)

25. a) Explain the WAP architecture with relevant sketches.

(OR)

b) (i) Discuss about Transmission / time-out freezing with reference to mobile transport layer. (7)

(ii) Explain about Transaction oriented TCP in detail. (7)

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