



(Pages : 2)

N –6671

Reg. No.

Name :

Eighth Semester B.Tech. Degree Examination, May 2022

(2008 Scheme)

Elective III

08.805(3) MOBILE AND WIRELESS NETWORKS (R)

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions. **Each** question carries **4** marks.

1. Explain the term interference in space, time, frequency and code domain.
2. What limits the number of simultaneous users in a TDM/FDM system compared to a CDM system?
3. What is the basic prerequisite for applying FDMA? How does this factor increase complexity compared to TDMA systems?
4. How much of the original GSM network does GPRS need? Which elements of the network perform the data transfer?
5. What are the general problems of satellite signals travelling from a satellite to a receiver?
6. How do IEEE 802.11 solve the hidden terminal problem?
7. What are the differences between infrastructure based and ad-hoc networks regarding roaming?
8. What advantages does the use of IPv6 offer for mobility?

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9. What is the basic purpose of DHCP? Name the entities of DHCP.
10. What do you mean by TCP snooping?

(10 × 4 = 40 Marks)

PART – B

Answer **one full** Question from each module. Each full Question carries **20** marks.

Module I

11. Discuss the working of DSSS and FHSS systems.
12. (a) Explain hidden terminal and exposed terminal problems. What happens in the case of such terminals if Aloha, slotted Aloha, reservation Aloha, or MACA is used?

(b) Discuss about the different multiplexing techniques.

Module II

13. (a) Explain the functional architecture of a GSM system.

(b) Explain how handover is done in a GSM system.
14. Explain the architecture of a bluetooth network.

Module III

15. Describe the components and interface of WAP1.X architecture and explain the method of integrating WAP components into existing fixed and wireless networks.
16. (a) What are general problems of mobile IP regarding security and support of quality of service?

(b) What problems of HTTP can WSP solve? Why are these solutions especially needed in wireless mobile environments?

(3 × 20 = 60 Marks)



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