



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION – COMPUTER SCIENCE

THIRD SEMESTER – NOVEMBER 2016

CS 3822 - WIRELESS AND COMMUNICATION NETWORKS

Date: 05-11-2016
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

PART-A

Answer All the Questions.

10 X 2=20

1. What is wireless networks?
2. Calculate the number of simultaneous users if W is the total spectrum, B is the bandwidth needed per user, N is the frequency reuse factor and m is the number of cells required covering an area.
3. What is CDMA?
4. Write the types of handoffs defined in IS-95.
5. Give any two design goal of CDPD.
6. What is SMS?
7. Mention the different physical layers support by IEEE802.11.
8. List out different types of HIPERLAN.
9. List out the different messages used for optimization.
10. Define Firewall?

PART- B

Answer All the Questions

5 X 8=40

11. (a) Compare Adhoc and infrastructure Topologies in wireless networks.
OR
(b) Explain channel borrowing techniques in wireless network planning.
12. (a) Discuss about different logical channels used in GSM.
OR
(b) Write short note about the following CDMA forward channels
(i) Pilot channel (ii) Sync channel
- 13 (a) Discuss the different categories of mobile data networks with an example for each.
OR
(b) Explain architecture and protocol layers of WAP.
- 14 (a) Discuss the architecture of infrastructure based IEEE802.11 with neat diagram.
OR
(b) Write short note on:
 - i. Key features of Bluetooth.
 - ii. Pico net
 - iii. Scatter net.
 - iv. Active member address.
- 15 (a) Discuss the entities and terminology used in mobile IP.
OR
(b) Discuss the function, advantages and disadvantages of Indirect TCP.

PART-C

Answer any TWO

2 X20=40

16 (a) Discuss the following (i) Cellular concepts

(ii) Cellular hierarchy

(b) Explain the following in GSM.

(i) Services (3)

(ii) Reference architecture (4)

(iii) Handoff (3)

17(a). (i) What is GPRS? (2)

(ii) What are the functionalities of SGSN and GGSN in GPRS? (8)

(b) Discuss the role of MAC management of IEEE802.11.

18 (a) Compare the different approaches used in classical enhancements to TCP.

(b) Explain the following concepts of CDPD.

(i) Services (4)

(ii) Interfaces (3)

(iii) Mobility management. (3)
