

REF NO:EX/IT/T/312/2017(S)

Jadavpur University
Bachelor of Information Technology
B. IT 3rd Year 1st Semester Supplementary Examination '2017
Sub: Wireless Networks

Answer any five questions

Full Marks: 100

Time: 3 hours

1. (4+10+6)
 - a. What are the disadvantages of wireless networks compared to wired networks?
 - b. What do you mean by hidden and exposed terminal problems?
 - c. List the important services provided by 3G, 4G, and 5G systems.
2. (10+10)
 - a. Define the following terms: frequency reuse, vertical handoff, Soft handoff, MSRN, IMEI.
 - b. With a suitable diagram show the main components of GSM networks and briefly explain their functions.
3. (6+10+4)
 - a. Explain the problems TCP faces in wireless networks.
 - b. Compare between split connection, end-to-end connection, localization, and explicit notification approaches to enhance TCP performance in wireless networks
 - c. Explain the problems of split connection approach.
4. (2+8+10)
 - a. What is triangular routing? How triangular routing problem is eliminated in MIPv4 and MIPv6?
 - b. Show the signaling mechanism if MIPv6 when two mobile nodes communicate and both are in foreign network.
5. (6+6+8)
 - a. Describe the following functionalities in AODV.
 - i. Route discovery
 - ii. Route maintenance
 - b. Compare between DSDV, DSR and AODV.
6. (10+10)
 - a. Describe a method for clock synchronization in infrastructure WLAN.
 - b. Power is a real crisis for wireless and mobile devices. Describe a suitable power management scheme for infrastructure WLAN.
7. Write short notes: (10+10)
 - a. CSMA/CA
 - b. Explicit Notification