

Assignment 1 (Unit 1)

1. What are the major phases in the evolution of mobile radio communication systems?
2. How has mobile radio communication evolved from the first-generation (1G) to fifth-generation (5G) technology?
3. What are the key characteristics of mobile radio systems around the world, and how do they differ by region?
4. How does the spectrum allocation for mobile radio systems vary globally?
5. What are the main components of a wireless communication system, and how do they interact?
6. Describe the functioning of a paging system and explain its role in early wireless communication.
7. What are the differences between a cordless telephone system and a cellular system?
8. How has the transition from analog to digital systems impacted the efficiency of wireless communication systems?
9. Explain the process of how a cellular call is initiated, transmitted, and received by the end-user?
10. What role do base stations and switching centers play in managing cellular calls?
11. Compare the functionalities of paging systems, cordless telephones, and cellular systems in terms of range, capacity, and application.
12. How do modern wireless communication systems address issues like interference, bandwidth limitations, and signal quality compared to older systems?

Assignment 2 (Unit 2)

1. What were the key advancements introduced in second-generation (2G) cellular networks compared to 1G?
2. How did the evolution of 2.5G mobile radio networks improve data transmission compared to 2G?
3. What role did General Packet Radio Service (GPRS) play in the development of 2.5G mobile networks?
4. How did the evolution of 2.5G TDMA standards contribute to better network efficiency and data services?
5. What are the main differences between 2G and 2.5G in terms of speed, capacity, and services offered?
6. How did the transition from 2G to 2.5G set the stage for the development of 3G networks?