

Student Registration Number

COURSE CODE: DCAP607

COURSE TITLE: WIRELESS NETWORKS

Time Allowed: 3 hours

Max. Marks: 80

1. *This paper contains 10 questions divided in two parts on 1 page.*
2. **Part A is compulsory.**
3. **In Part B (Questions 2 to 10), attempt any 6 questions out of 9. Attempt all parts of the selected question.**
4. *The marks assigned to each question are shown at the end of each question in square brackets.*
5. *Answer all questions in serial order.*
6. **The student is required to attempt the question paper in English medium only.**

Part A

- Q1
- a) Write advantages of wireless network. [2]
 - b) Categorization of ad hoc routing protocols. [2]
 - c) Write down advantage of Source-Initiated On-Demand Approaches. [2]
 - d) What are the key features of 3G technology? [2]
 - e) Despite of having the same rate of 802.11g and 802.11a, why 802.11a is not so popular? [2]
 - f) What is a common standard for wireless LANs? [2]
 - g) How is throughput different from data rate? [2]
 - h) Mention the sources of RF interference? [2]
 - i) Which generation of cellular systems offers data rates up to 2 Mbps? [2]
 - j) Mention the three major security threats of a wireless network? [2]

Part B

- Q2 Explain wireless system architecture. Explain its components in detail. [10]
- Q3 In Wireless network how can we remove Hidden node and Exposed node problem? [10]
- Q4 GSM has its own set of communication protocols, interfaces, and functional entities. It is capable of supporting roaming, and carrying speech and data traffic. Discuss the given statement and. Mention the network architecture of GSM. [10]
- Q5 We cannot build a big network using Bluetooth. Comment and mention the Limitation of Bluetooth. [10]
- Q6 Discuss the term Wireless MAN. Mention the Components of a wireless MAN. What are the advantages of using point-to-multipoint systems versus point-to-point for interconnecting multiple sites? [10]
- Q7 With the help of a scenario show the working of Wireless Routing Protocol (WRP). [10]
- Q8 Mention the need of IEEE standard in networks. Mention different 802.11 standards. [10]
- Q9 Discuss the role of key with respect to security in wireless network. With the help of an example differentiate Public and Private Key. [10]
- Q10 Discuss some of the most useful or interesting applications of wireless networking both now and in the future. [10]