

QP Code : 17955

(3 Hours)

Total Marks : 80

N. B. : (1) Question No. 1 is **compulsory**.

(2) Attempt any **four** from remaining six questions.

(3) Assumptions should be made whenever required and should be clearly stated

(4) Answers to sub questions should be answered together

(5) Illustrate answers with diagrams wherever necessary

1. (a) Explain the process of call set up and mobility management in GSM. 10
What are various roaming scenarios in GSM?
- (b) How is spread spectrum technique useful in Wireless Communication? 10
Explain FHSS and DSSS.
2. (a) What are piconet and scatternet? Explain various protocols supported by bluetooth protocol architecture. 7
- (b) What are Convolution codes? Draw an encoder with value $k=1, n=2, K=3$. Encode the bit sequence 1100001 using a $(2, 1, 3)$ encoder? 8
3. (a) What is an antenna? What are different types of antenna? Explain the term free space loss. 7
- (b) Explain the concept behind Dynamic Source Routing (DSR). How it is different from Destination Sequenced Distance Vector (DSDV)? 8
4. (a) Describe WAP Programming Model. Explain the role of WAP gateway and WAP user agent profile. 8
- (b) Explain following terms with respect to cellular networks: 7
(i) Handoff (ii) Frequency Reuse
5. (a) Explain the operation of Mobile IP. 7
- (b) Explain Selective TCP and Snooping TCP with their advantages and disadvantages. 8
6. (a) Explain the role of GPRS support nodes in GPRS architecture. 8
- (b) Describe WIMAX network reference model along with its features. 7
7. Write short notes on: (Any three) 15
(a) IEEE 802.11 for WiFi access
(b) Mobile Number Portability
(c) VoIP
(d) 1G, 2G, 3G
(e) iMode