

M.C.A.(Sem-V)

April-2023

[3 hours]

Total Marks: 100

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

2) Attempt any four from the remaining six questions.

3) Figures to the right indicate full marks

1. (a) Explain the IEEE 802.11 system architecture and its services. (10)  
(b) Explain GSM system architecture in detail. (10)
2. (a) List the benefits of spread spectrum. Describe Direct Sequence Spread Spectrum (10)  
(b) What is handover? Discuss the different types of handover and what in what situation the handover takes place. (10)
3. (a) What are block codes and convolution codes? Explain the  $(n,k,K)$  convolution code. Draw an encoder with values  $(2,1,3)$  (10)  
(b) What is WiMax? Explain the basic component and setup of WiMax networks. (10)
4. (a) Explain in brief Bluetooth protocol stack. (10)  
(b) Explain the use of WPA and WPA2 in implementing WiFi security. (10)
5. (a) What are the functions supported by WML? In brief, describe WTLS security services. (10)  
(b) What is CDMA? Compare CDMA with TDMA and FDMA techniques. (10)
6. (a) Explain 802.11 architecture in details. (10)  
(b) What are the functions supported by WML? In brief, describe WTLS security services. (10)
7. Write Short Notes on any four of the following :- (20)
  - a) Digital modulation techniques (ASK, FSK, PSK)
  - b) Mobile IP
  - c) TAPI
  - d) Free Space Loss
  - e) 1G,2G,3G

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