Total Marks: 100

(3 Hours)

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) What are the advantages of spreading the spectrum? Discuss how it is done using frequency hopping method. (10)
   (b) Explain the different components of GSM architecture and discuss the functions of each component. (10)

2. (a) Discuss the various impairments which will affect the wireless environment. (10)
   (b) What is CDMA? Compare CDMA with TDMA and FDMA techniques. (10)

3. (a) What does (n,k,K) mean in convolution code? Explain (2,1,3) with the help of shift register and state diagram. (10)
   (b) Describe J2ME architecture with respect to various configurations and profiles. List various states of midlet life cycle. (10)

4. (a) What is piconet and scatternet? Explain in brief Bluetooth protocol stack. (10)
   (b) Discuss the IEEE 802.11 system architecture with its services. (10)

5. (a) Discuss the different types of antennas used in wireless communication. (10)
   (b) Why WEP is a weak algorithm? Explain the use of WPA and WPA2 in implementing WiFi security. (10)

6. (a) What is WiMax? Explain the basic component and setup of WiMax networks. (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) Fresnel Zone
   c) Symbian OS
   d) History of wireless communication
   e) WAE

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