

Instructions:-

- (1) Attempt all Questions of both sections in same answer book / Supplementary.
- (2) Use of Programmable calculator & any other electronic instrument is prohibited.
- (3) Instructions written on main answer Book are strictly to be obeyed.
- (4) Draw neat diagrams & figures (If necessary) at right places.
- (5) Assume suitable & Perfect data if needed.

SECTION-I

- Q-1 Answer the following.
- (a) Compare voice oriented networks and data oriented networks? 3
 - (b) Differentiate 3G Vs 4G. 2
 - (c) Name five design considerations in selecting a modulation scheme for a wireless network. 2
- Q-2 Answer the following.
- (a) Define: 4
 - a. Persistent, b. Non persistent,
 - c. Care of address, d. Foreign Agent.
 - (b) Explain the effect of path loss and Doppler effect on radio propagation signals of wireless networks 5
 - (c) Name and explain the forward and reverse channels used in IS-95. 5
- OR
- Q-2 Answer the following.
- (a) Compare single hop and multihop network topologies. 4
 - (b) Draw and explain Two radio propagation model. 5
 - (c) Explain different types of Cell. 5
- Q-3 Answer the following.
- (a) What are the methods of spread spectrum transmission? Write its advantages. 7
 - (b) Explain system architecture and handoff management techniques of GPRS. 7

OR

- Q-3 Answer the following.
- (a) Explain GSM network architecture. 7
 - (b) Explain the following in detail: 7
 - a. Cell splitting, b. Cell sectoring, c. Cell partitioning.

SECTION-II

- Q-4 Answer the following.
- (a) What is the difference between the access technique of IEEE802.3 and IEEE802.11? 3
 - (b) Explain the different properties of EM waves. 2
 - (c) Why is hexagonal cell shape preferred over square or triangular cell shape to represent the cellular architecture? 2
- Q-5 Answer the following.
- (a) What is wireless application protocol? Explain its architecture. 5
 - (b) Compare CDMA, TDMA and FDMA technologies 5
 - (c) What are the sectored antennas? How are they useful in combating multipath? 4



OR

- Q-5 Answer the following.
- (a) Explain mobility management in wireless networks 5
 - (b) Define and explain : Signal to Interference ratio calculation 5
 - (c) Define GSM channels. 4
- Q-6 Answer the following.
- (a) Explain Mobile IP. Why do we need it? Explain Abstract mobility management model. 7
 - (b) Explain different modes of propagation in detail. 7

OR

- Q-6 Answer the following.
- (a) What is ad- hoc network? Compare the ad-hoc and infrastructure network Topologies 7
 - (b) Describe protocol stack of Bluetooth? 7

*****13**14*****

