

Con. 2858-09.

(REVISED COURSE)

VR-4800

(3 Hours)

[Total Marks : 100

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

(2) Attempt any **four** questions out of remaining **six** questions.

(3) Assume **suitable** data wherever **necessary**.

1. (a) Explain purpose of long code in both forward link and reverse link CDMA. 5
(b) Can the uplink and downlink frequencies in GSM/CDMA be interchanged ? If not, why ? 5
(c) List and discuss about the factors influencing small scale fading. 5
(d) Explain cell dragging problem in cellular system. 5
2. (a) With a neat block diagram, explain reverse CDMA channel. 12
(b) Compare CDMA and GSM system in detail. 8
3. (a) Explain in detail GSM control channels. 10
(b) How does sectoring improve S/I in cellular system. 10
4. (a) Explain DECT standard with respect to radio and signalling aspects and architecture. 10
(b) Need of SAT tone and ST tone in AMPS system. 10
5. (a) Give the features of the specific mobile satellite system that focusses on wireless broadband services. 10
(b) Discuss IMT2000 system. 10
6. (a) For the two-ray ground reflection model, derive the expression for received power at a distance 'd' from the transmitter. 12
(b) Explain soft capacity in CDMA. How many users can simultaneously converse in IS-95 system ? Why is it not possible to get infinite capacity in CDMA system. 8
7. Write short notes on :— 20
 - (a) Mobile-assisted handoff
 - (b) Soft handoff
 - (c) Authentication in GSM
 - (d) Iridium system.