Reg. No. : ....

Name : ....

Seventh Semester B.Tech. Degree Examination, May 2014
(2008 Scheme)
08.755 : (Elective – III) – CDMA SYSTEMS (T)

Time : 3 Hours

Max. Marks : 100

Instruction : *Answer **all** questions from Part **A** and **two** questions from **each** Module of Part **B**.*

PART – A

1. Give orthogonal expansion of SS signals.

2. Explain coherent reception of FH-SS signals.

3. Explain processing gain of DS-CDMA system.

4. Explain randomness property of PN sequence.

5. What is Shannon capacity of DS-CDMA ?

6. Explain synchronisation of PN signals.

7. Explain handoff strategies in CDMA systems.

8. Give optimum detector for synchronous channel.

9. Explain MMSE MUD.

10. Explain the need for power control in CDMA systems.   (10×4=40 Marks)

PART – B

Module – I

11. Describe the working of direct sequence spread spectrum systems.   10

12. Explain the generation of frequency hopped spread spectrum signals.   10

13. Describe coherent reception of FH-SS signals.   10

Module – II

14. Describe forward error control coding in spread spectrum systems.   **10**

15. Describe acquisition process of FH-CDMA systems.   **10**

16. Explain orthogonal convolutional coding in DS-CDMA systems.   **10**

Module – III

17. Derive erlang capacity of CDMA system.   **10**

18. Explain optimum detector for asynchronous channels-2 user.   **10**

19. Describe non decorrelating linear multi user detector.   **10**