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Reg. No. : .....

Name : .....

Seventh Semester B.Tech. Degree Examination, November 2015
(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

JOHN COX MEMORIAL CSI INSTITUTE OF TECHNOLOGY
TRIVANDRUM-11
KANNAMMOOLA

1. Explain the concept of CDMA systems.
2. Give orthogonal expansion of SS signals.
3. Explain processing gain for DS-CDMA system.
4. What are FEC coding in SS systems ?
5. Explain orthogonal convolutional coding in CDMA.
6. Give the properties of pN sequences.
7. What is MUD ?
8. Explain decorrelating detectors in synchronous channel.
9. What is the need for power control in CDMA systems ?
10. Give Erlang capacity of CDMA system. **(10×4=40 Marks)**

P.T.O.

PART – B

Module – I

11. With the help of block diagram explain the working of FH-SS systems. **10**

12. Describe coherent reception of DS-CDMA signals for downlink transmissions. **10**

13. Describe Pulse position hopped spread spectrum communication. **10**

Module – II

14. Explain non coherent reception of encoded DS-CDMA systems. **10**

15. Describe the generation of pN signals from pN sequences. **10**

16. Derive the equation for Shannon capacity of DS-CDMA systems. **10**

Module – III

17. Describe SIC and PIC in detail. **10**

18. Explain coherent single user MF in Rayleigh fading channel. **10**

19. Describe Decorrelating detectors in asynchronous channels. **10**
