2006 CALICUT UNIVERSITY
EIGHTH SEMESTER B.TECH ENGINEERING DEGREE EXAMINATIONS
WIRELESS MOBILES COMMUNICATIONS
(ELECTRONICS COMMUNICATION ENGINEERING)

JUNE 2006

TIME::3 HOUR
MARK:100

ANSWER ALL QUESTIONS

PART A [8*5=40]

1. (a) What is meant by coherence bandwidth ? Give the expression.

(b) List the types of small-scale fading.

(c) Write the concept of polarization diversity.

(d) Write the concept of equal gain combining technique.

(e) What is meant by near4ar effect ? Explain.

(f) Write the concept of can splittug.

(g) Define jamming margin and give the expression.

(h) Write the concept of time hopped spread spectrum systems.

PART B [15*4=60]

(a) Derive the expression for the power received in 2-ray ground reflection model.
                     Or
(b) Derive the impulse response model of a ltipath chance.

3. (a) Derive the improvement offered by selection diversity combining.
                     Or
(b) Discuss the concept of RAKE receiver with neat diagram.

4. 1 a i Explain how does 0e31 sectoring imlxvre capacity in cellular system.
                     Or
(b) What is meant by adjacent channel interference ? How is it reduced in cellular systems ?

5. (a) Derive the expression for processing gain in direct-sequence spread spectrum system.
                     Or
(b) Discuss the spnchronisatioo techniques used in spread spectrum system.

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