

**EV 313 R**

**B.Tech. DEGREE EXAMINATION, NOVEMBER 2009.**

**Seventh/Eighth Semester**

**ECE**

**SPECIAL TOPICS IN COMMUNICATION  
ENGINEERING**

**(For 2003 batches)**

**Time : Three hours**

**Maximum : 75 marks**

**Answer FIVE questions, choosing ONE full from each  
Unit.**

**All questions carry equal marks.**

**UNIT I**

1. Explain different line coding technique that helps to improve the quality of transmission in case of B-ISDN.

**Or**

2. Explain the ISDN protocol architecture in detail.

## UNIT II

3. Explain Hap D protocol basic characteristics and its formats. (15)

Or

4. With a neat diagram explain SS7 architecture. (15)

## UNIT III

5. With a neat diagram explain the ATM switching principles and OAM functions. (15)

Or

6. List out the types of ATM services and explain each type in detail. (15)

## UNIT IV

7. Explain about the following :
- (a) Tele net (5)
  - (b) Gopher (5)
  - (c) Email news group. (5)

Or

8. Explain in detail about the Internet resources and library card catalogues. (15)

## UNIT V

9. Explain in brief about evolution of CDMA one to CDMA 2000 and also compare the major technical differences between CDMA 2000 and W-CDMA. (15)

Or

10. Explain with a suitable block diagram of GSM cellular radio network structure with respect to the framing and coding principles. (15)

## ET 373 R

B.Tech. DEGREE EXAMINATION, NOVEMBER 2009.

Seventh Semester

ECE

ANTENNAS AND WAVE PROPAGATION

(For 2003 batches)

Time : Three hours

Maximum : 75 marks

Answer FIVE questions choosing ONE full question from each Unit.

All questions carry equal marks.

### UNIT I

1. Derive effective aperture dipole and aperture antennas in detail. (15)

Or

2. Explain the terms : (15)

- (a) Gain
- (b) Bandwidth
- (c) Polarisation
- (d) Reciprocity theorem
- (e) Radiation resistance.

## UNIT II

3. Explain in detail the fields for small loop antenna and its applications. (15)

Or

4. Explain the array of two point sources. (15)

## UNIT III

5. Explain in detail :

(a) Horn antenna (7)

(b) Log periodic antenna. (8)

Or

6. (a) State Babinet's principle and explain slot radiators. (7)

(b) Derive an expression for folded dipole. (8)

## UNIT IV

7. Explain fading of signal, selective fading and diversity reception. (15)

Or

8. Explain refraction and reflection of sky wave by ionosphere. (15)

## UNIT V

9. Explain LOS microwave relay links in detail. (15)

Or

10. Explain the term :

(a) Field pattern and gain of antennas (7)

(b) Radiation pattern. (8)