

2008 COCHIN UNIVERSITY OF SCIENCE & TECHNOLOGY

**B.TECH ELECTRICAL AND ELECTRONICS ENGINEERING
COMMUNICATION ENGINEERING**

APRIL 2008

**TIME: 3 HOUR
MARK: 90**

**ANSWER ANY SIX QUESTION
ALL QUESTIONS CARRY EQUAL MARKS**

MARK [6*15]

- 1a. Explain an AM modulator with block diagram
- b. What is meant by modulation index in AM? What is its importance?
- c. Write notes on VSB transmission
- 2a. Explain Armstrong modulator
- b. Compare FM and PM with the help of mathematical expressions
- 3a. Differentiate between low level and high level AM transmitters
- b. Explain the problem of images and methods used to overcome it
- 4a. Explain the FM stereo receiver
- b. Explain PAM, PWM, PPM
- 5a. What is the effect of ground on antennas?
- b. Explain different modes of electro magnetic wave propagation
- 6a. Differentiate between resonant antennas and non-resonant antennas
- b. Describe high frequency directional antennas
- 7a. Write detailed notes on cavity resonators
- b. Explain different types of microwave antennas
- 8a. With neat sketches explain the working of a Klystron
- b. With the help of a block diagram, explain various subsystems in a communication satellite
- 9a. Draw the block diagram of an optical fibre communication system and explain
- b. Explain facsimile system
- 10a. Explain how a distant object is detected using pulsed radar system
- b. Explain the details of a color television transmitter with neat sketches