

**C 61589**

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Name.....

Reg. No.....

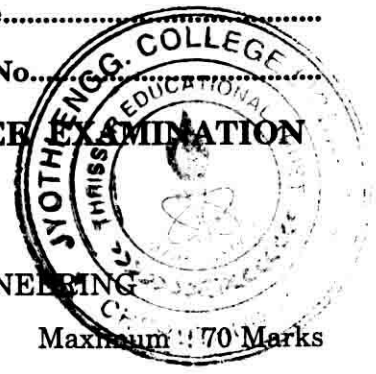
**FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION  
APRIL 2014**

(2009 Scheme)

**IT 09 404—PRINCIPLES OF COMMUNICATION ENGINEERING**

Time : Three Hours

Maximum : 70 Marks



**Part A**

*Answer all questions.*

1. Define Modulation index.
2. List the properties of PCM.
3. State the purpose of using carriers.
4. Define Demodulation.
5. What is meant by diversity reception ?

(5 × 2 = 10 marks)

**Part B**

*Answer any four questions.*

6. Draw the electromagnetic spectrum and mention the use of different spectra for different applications.
7. Explain the working of PAM in detail.
8. Write a note on balanced modulators.
9. Explain the working of slope detectors.
10. How are AM waves demodulated ? Explain any one method.
11. Explain the working of AM transmitters.

(4 × 5 = 20 marks)

**Part C**

12. (a) With appropriate examples, explain the working of TDM and FDM.

*Or*

- (b) Explain the block diagram of a modern communication system.

13. (a) How is a FM converted to PM ? Explain any one method.

*Or*

- (b) Write about the working of square law modulations.

Turn over

14. (a) Explain the working of synchronous and envelope detection in detail.

*Or*

(b) Explain the demodulation of PAM and PPM signals.

15. (a) Write in detail about the working of class B push-pull linear amplifier.

*Or*

(b) Explain in detail about the working of straight receiver and superheterodyne AM receiver.

(4 × 10 = 40 marks)