CODE NO: NR421002 NR

2006 JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY

IV B.TECH II SEMESTER SUPPLEMENTARY EXAMINATIONS
TELEMETRY AND TELECONTROL
(COMMON TO ELECTRONICS & INSTRUMENTATION ENGINEERING
AND ELECTRONICS &CONTROL ENGINEERING

APR/MAY 2006

TIME - 3 HOUR
MARK – 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) What is meant by Channel? Mention the various types of channels and explain briefly.

(b) Hydraulic systems are replaced by Pneumatic systems in Air Craft System. Justify

(c) Draw a neat sketch and explain the operation of Pneumatic motor. [4+6+6]

2. (a) List and briefly explain about the transducers used in current and voltage Telemetry system.

(b) Write the standards for Direct recording used for FM/FM - derived Telemetry. [8+8]

3. Draw the circuit diagram of a frequency meter that is used for analogue indication of telemetered data. Explain the function of the circuit and its working principle showing the waveforms at different stages including output. How is the final averaging done? [16]

4. Explain the modulation techniques used in radio telemetry and explain how they help in signal processing. [16]

5. Briefly explain about the sources of error in PWM Telemetry system. [16]

6. What are different sources of light used in optical fibre telemetry systems? Explain any two of them. Compare their advantages and disadvantages. [16]

7. Write short notes on :

(a) Water level telemetry (pulse interval method)

(b) rotating transducers.

(c) Electronic Telemetry, (Pulse Phase Modulation)

(d) DC Compensation method. [4+4+4+4]

8. What is meant by remote regulation. Explain about remote regulation with examples.