
Answer any FIVE Questions All Questions carry equal marks

1. Draw the sketch of pneumatic Telemetry system and explain. How is fluid line characterized? What is the important parameter in such a system?
2. (a) How is propagation of light supported in a fibre optic cable? What is the critical Angle of incidence and on what factors does it depend?

(b) In a fibre optic cable the refractive indices of the core, cladding and air are 1.49, 1.36 & 1.00 respectively. Calculate the critical angle and numerical aperture.
3. With neat sketch explain the basic concept of position telemetering system using

(a) a bridge type configuration.

(b) Synchros
4. Why are superheterodyne receivers preferred to over others in FM/FM or PCM transmission systems? Draw the schematic block diagram of a superheterodyne receiver and explain its operation.
5. (a) Draw the block diagram of digital to digital PCM telemetry and analog to analog PCM telemetry link.

(b) Explain about De-commutator counters.
6. (a) What is a multimode graded index fibre and explain about it with necessary figures and equations.

(b) What are single mode fibres and explain them in detail with necessary figures and equations.
7. Explain briefly analogue Tele control methods with time variable transmission signal.
8. List and briefly explain the environmental and interface conditions of Tele control apparatus.

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