



12. (a) What is a wireless sensor network? Elaborate the wireless sensor network architecture with a diagram. (13)

Or

- (b) Present an elaborate note on the energy consumption rate for sensors in a wireless sensor network. (13)
13. (a) Outline the low energy adaptive clustering hierarchy (LEACH) protocol for wireless sensor networks. (13)

Or

- (b) What is energy efficient routing? Present an outline of energy efficient routing in wireless sensor networks. (13)
14. (a) Outline the issues and challenges in security provisioning for wireless sensor networks.

Or

- (b) Present an outline of SPINS, security protocol for sensor networks. (13)
15. (a) Outline the features of node-level simulators for wireless sensor networks. (13)

Or

- (b) Outline the features of TinyOS and CONTIKI OS for wireless sensor networks. (13)

PART C — (1 × 15 = 15 marks)

16. (a) Present an ad hoc network design that can be used in a geographic location affected by cyclone. State the functional requirements you are considering. (15)

Or

- (b) Present a wireless sensor network design that can be used for surveillance and environment monitoring in a zoo. A zoo is a facility in which animals are confined within enclosures, displayed to the public, and in which they may also be bred. State the functional requirements you are considering. (15)