

# Wireless Sensor Network

## Course Activity:

1. **Topic Name:** Adhoc /Wireless sensor networks Applications and design issues

*Name of the Activity:* Group Grid

*Description of the Activity:* Students can form a team and discuss on comparisons

between cellular and adhoc networks and their applications. To design sensor network

architecture for different applications within stipulated time.

2. **Topic Name:** Different MAC protocols in wireless sensor networks

*Name of the Activity:* Fishbowl debate

*Description of the Activity:* For example, the person on left takes one position on a topic

for debate, the person on right takes the opposite position, and the person in the middle

takes notes and decides which side is the most convincing and provides an argument for

his or her choice.

\_ Students can get an idea about the MAC protocols using this activity.

3. **Topic Name:** Routing Protocols in sensor networks

*Name of the Activity:* Think-Pair-Share

*Description of the Activity:* Routing can be done in different protocols in different

approaches. Students write a response and then share it with a student nearby. Students

clarify their positions and discuss points of agreement and disagreement. The instructor

can use several answers to illustrate important points or facilitate a whole class

discussion.

## GATE/Competitive Exams Questions

1) Explain the physical layer and transceiver design considerations in wireless networks.

2) Explain major issues that are to be considered for Wireless Internet.

3) Discuss in detail various modulation techniques.

4) The portion of the electromagnetic spectrum occupied by a signal is called \_\_\_\_\_

(a) Signal spectrum (b) Bandwidth (c) Frequency width (d) Signal strength

5) You have 5 information signals and only one transmitter. What technique will help in

transmitting all the 5 signals?

(a) Frequency modulation (b) Multiplexing

(c) Amplification (d) Amplitude modulation

- 6) What networking structure do the 802.11 standards define?  
(a) WLAN (b) BSS (c) WPAN (d) WMAN
- 7) Which one of the IEEE 802 committees is tasked with the development of security standards?  
(a) 802.10 (b) 802.16 (c) 802.15 (d) 802.11
- 8) Which Bluetooth protocol performs link setup, authentication, link configuration, and the discovery of other Bluetooth devices?  
(a) LMP (b) L2CAP (c) Radio (d) SIG
- 9) The use of Ultra wideband (UWB) technology for WPANs is specified under the \_\_\_\_\_ standards.  
(a) 802.15.3 (b) 802.15.1 (c) 802.15.4 (d) 802.15.2