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- Notes :
1. All questions carry marks as indicated.
 2. Answer **any five** questions.
 3. Assume suitable data wherever necessary.
 4. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Explain any four major challenges of security in WSN. 7
b) What are the application and limitation of WSN? 7
2. a) Draw the architecture of sensor node list various modes of a sensor node. 7
b) Discuss energy consumption concept of the different components of a sensor node. 7
3. a) What do you understand by sensor in WSN? Explain types of sensor & its application in brief. 7
b) Write a short note on- 7
 - i) Design goal of MAC protocol in WSN.
 - ii) Major issues for design MAC protocol in WSN.
4. a) Explain low energy adaptive clustering hierarchy (LEACH) with the help of suitable example. 7
b) Write a short note on- 7
 - i) Data centric protocol
 - ii) Location based protocol
5. a) What do you understand by MAC protocol? Explain the classification of MAC protocol in brief. 7
b) Explain about optimization goals and figure of merit in detail. 7
6. a) Discuss the main responsibilities of physical layer explain about the design parameters of physical layer. 7
b) List the classification of routing protocol. Explain any one in detail. 7
7. a) Briefly specify IEEE 802.15.4 MAC protocol and explain whether the MAC protocol of 802.11 & Bluetooth be used for WSN Justify. 7
b) Write a short note on Geo-graphic routing. 7
8. a) What is the principle behind scheduled based protocol? Explain any one scheduled based protocol. 7
b) Write a short note on- 7
 - i) Gateway concepts
 - ii) Topology control
