



- Notes :
1. Solve Question 1 OR Questions No. 2.
 2. Solve Question 3 OR Questions No. 4.
 3. Solve Question 5 OR Questions No. 6.
 4. Solve Question 7 OR Questions No. 8.
 5. Solve Question 9 OR Questions No. 10.
 6. Solve Question 11 OR Questions No. 12.
 7. Due credit will be given to neatness and adequate dimensions.
 8. Assume suitable data whenever necessary.
 9. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) What are different Network characteristics. Also state network application. **6**
- b) What are design issues associated with WSN. **7**

OR

2. a) Explain sensor network architectural element with proper diagram. **7**
- b) Write short note on : **6**
- i) Zig-bee.
 - ii) IEEE 802.15.4
 - iii) WSN standard.
3. a) Explain classification of WSN with suitable example. **5**
- b) Explain sensor Network architecture with neat diagram. **5**
- c) State difference between source node & sink node with example. **3**

OR

4. a) Write short note on : **6**
- i) Protocol stack for WSN.
 - ii) CSMA.
 - iii) Aloha.
- b) Explain MAC protocol in WSN with example. **7**
5. a) Write short note on MAC design for WSN. **7**
- b) Differentiate between S-MAC, DS-MAC, MS-MAC. **7**

OR

6. a) Explain self organizing MAC with suitable example. **7**
- b) What is Traffic adaptive medium Access. Explain in brief. **7**

7. a) What is the difference between Data Dissemination & gathering. 6
b) What are routing challenges & design issues in WSN. 7

OR

8. a) What are different routing strategies in WSN. Explain each in brief. 8
b) What is flooding & its variants. Explain effect of flooding in network performance. 5
9. a) Explain broadcast & multicast Authentication in Transport protocol. 7
b) Discuss Transport protocol Design. 6

OR

10. a) Explain Transport protocol design with example. 5
b) Write short note on : 8
i) Traditional Transport Protocol.
ii) Signature.
iii) Authenticating public key.
11. a) What is difference between mate OS & magnet OS? Also explain Tiny OS. 8
b) Explain Traditional network management models. 6

OR

12. a) Explain MANNA management Architecture with suitable diagram. 7
b) What are different network management design issues in WSN? 7
