

**B.Tech. SEM -VII ( Computer) 2014 Course (CBCS) : SUMMER - 2019**  
**SUBJECT: ELECTIVE-III AD- HOC AND SENSOR NETWORKS**

Day: Wednesday  
Date: 15/05/2019

S-2019-2808

Time: 02.30 PM TO 05.30 PM  
Max. Marks: 60

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**N.B:**

- 1) All questions are **COMUPLSORY**.
  - 2) Figures to the right indicate **FULL** marks.
  - 3) Assume suitable data if necessary.
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- Q.1** a) Explain types of Ad-Hoc networks? (05)  
b) Illustrate the steps involved in analyzing working of Ad-hoc networks. (05)

**OR**

- Q.1** a) What is sensor network? Explain different types of sensor networks. (05)  
b) Explain architectures of sensor networks. (05)

- Q.2** What is role of radio waves in wireless networks? Explain with suitable example. (10)

**OR**

- Q.2** Discuss IEEE 802.11 standards in detail. (10)

- Q.3** Explain different Routing Protocols in Ad-hoc networks? What is multicast routing. (10)

**OR**

- Q.3** Discuss architecture reference model for multicast routing protocols? (10)

- Q.4** a) How to secure routing in Ad-hoc and wireless sensor networks. (05)  
b) What are different network security attacks? (05)

**OR**

- Q.4** a) Explain different issues in designing a transport layer protocol for Ad-hoc and sensor networks? (05)  
b) Why security is essential in case of sensor networks. (05)

- Q.5** a) Write issues and challenges in providing QoS in Ad-hoc and sensor Networks. (05)  
b) What is QoS Frameworks for Ad-Hoc wireless network (05)

**OR**

- Q.5** a) Define types of energy resources and energy management in Ad-hoc wireless networks. (05)  
b) What are different QoS parameters used in Ad-hoc networks. (05)

- Q.6** Explain with help of suitable example mobile Ad-hoc Network (MANET) also brief the real life examples of Ad-hoc and Sensor networks. (10)

**OR**

- Q.6** Explain WSN in detail? Write any two applications Ad-hoc and sensor networks. (10)