

Total No. of Questions : 8]

SEAT No. :

PE-2589

[Total No. of Pages : 2

[6583]-120

**T.E. (Information Technology)**  
**COMPUTER NETWORK AND SECURITY**  
**(2019 Pattern) (Semester - VI) (314451)**

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Attempt Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full mark.
- 4) Assume suitable data necessary.

- Q1)** a) Explain MACAW protocol in detail with the help of diagram. [8]  
b) Explain the connection establishment and data transfer phase in the following routing protocols with suitable diagram. [9]  
i) AODV  
ii) DSR

OR

- Q2)** a) Differentiate between infrastructure network and infrastructure less network. What are issues in Adhoc wireless network? [8]  
b) List types of Wireless Sensor Network architecture. Explain the phases of LEACH routing protocol in detail. [9]

- Q3)** a) What is Cipher Block Chaining (CBC)? Explain the process and Characteristics of CBC with suitable diagram. [10]  
b) What is substitution cipher? Explain the types of mono alphabetic cipher with suitable example. [8]

OR

- Q4)** a) Explain different types of attacks on message integrity and availability.[10]  
b) What is network attack? Differentiate between active and passive attack. [8]

- Q5)** a) Explain the working of DES with suitable example. [10]  
b) Describe how digital signature standard scheme generate and verify the digital signature. [8]

OR

P.T.O.

- Q6)** a) Explain Diffie Hellman algorithm with suitable example. [9]  
b) Explain RSA algorithm with suitable example. [9]
- Q7)** a) What is the difference between hardware attack and software attack?  
Write a note on MIM attack. [9]  
b) Define Vulnerability. Explain types of vulnerabilities in detail. [8]
- OR
- Q8)** a) Define cyber security and explain the different layers of security. [9]  
b) Write a short note on : [8]  
i) Cyber Stalking  
ii) Internet Governance in cyber security

