

Total No. of Questions : 8]

**PD4261**

SEAT No. :

[Total No. of Pages : 2

[6403]-57

T.E. (AI & DS)

**CYBER SECURITY**

(2019 Pattern) (Semester - VI) (317530)

*Time : 2½ Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) Answer 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 marks.

**Q1)** a) Write short note on X.509. [5]

b) What is Digital Signature Standard? Explain the DSS approach. [6]

c) Perform encryption and decryption using RSA algorithm for  $p = 11$ ,  $q = 3$ ,  $e = 3$  and  $M = 7$ . [6]

OR

**Q2)** a) Identify and explain the various methods of authentication. [5]

b) Explain the operations of Kerberos. [6]

c) In a Diffie-Hellman Key Exchange, Alice and Bob have chosen prime value  $q = 17$  and primitive root  $= 5$ . If Alice's secret key is 4 and Bob's secret key is 6, what is the secret key they exchanged? [6]

**Q3)** a) What is VPN? Explain types of VPN. [6]

b) Explain IPsec also state the advantages of IPsec. [6]

c) Distinguish between PGP and S/MIME. [6]

OR

**Q4)** a) Explain ISAKMP protocol of IPsec. [6]

b) Explore Secure Socket Layer Handshake protocol in detail. [6]

c) Distinguish between IDS and IPS. [6]

P.T.O.

- Q5)** a) List and explain types of intrusion detection system (IDS) [6]  
b) Enlist the various types of firewall. [5]  
c) Explain : [6]

- i) Dictionary Attack
- ii) Social Engineering attack
- iii) Brute Force attack

OR

- Q6)** a) What is Attribute-Based Access Control (ABAC) [5]  
b) What is trusted system? Explain in brief. [6]  
c) Differentiate packet filtering router and stateful Inspection firewall. [6]

- Q7)** a) List types of VoIP hacking and Explore any 3? Describe a few counter Measures to prevent remote connectivity and VoIP hacking. [8]  
b) Who are cyber criminals? What are types of cybercrimes? [6]  
c) Explain Personally Identifiable Information PII. [4]

OR

- Q8)** a) What is cyberstalking? Compare between cyberstalking and physical stalking. [8]  
b) Explain the terms : [6]
  - i) Virus
  - ii) Phishing
  - iii) Spoofing
  - iv) Mobile hacking
  - v) Internet Pharming
  - vi) Cyber Forensic  
c) Compare Security and Privacy. [4]

