

Total No. of Questions :10]

SEAT No. :

P3445

[5670] - 721

[Total No. of Pages :2

B.E. (Information Technology)
INFORMATION AND CYBER SECURITY
(2015 Pattern) (414453) (EndSem) (Semester-I)

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., Q.9 or Q.10.
- 2) Neat diagram 5 must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data if necessary.

- Q1) a)** Explain Security Architecture and operational models [5]
b) Using the Extended Euclidean algorithm, find multiplicative inverse of [5]
i) 1234 mod 4321
ii) 24140 mod 40902

OR

- Q2) a)** Write short note on Intrusion Detection System with Types. Limitations and Challenges [5]
b) What are different types of Security attacks and explain Malicious code [5]
- Q3) a)** Explain RSA algorithm in detail with example. [5]
b) What is Chinese Remainder Theorem? Explain with example. [5]

OR

- Q4) a)** Write short note on Diffie-Hellman with justification. [4]
b) Explain Elliptic Curve Arithmetic and Elliptic Curve Cryptography. [6]
- Q5) a)** What protocols comprise SSL with neat diagram? What is the difference between SSL connection and SSL session? [6]
b) What services are provided by IPsec? Give difference between Transport mode and Tunnel Mode. [6]

OR

P.T.O.

- Q6)** a) What is the role of X.509 in cryptography? [6]
b) Explain SHA-1 in detail and explain how can Mail Security be achieved?[6]

- Q7)** a) Discuss SSL with respect to four phases [10]
• Establish security capabilities
• Server authentication & key exchange
• Client authentication & key exchange
• Finish
b) Explain IP security protocols AH and IPSec in detail [10]

OR

- Q8)** a) Explain the types of Cyber-Crimes. Explain Cybercrime scenario in India [10]
b) What are challenges in Social engineering? Explain Cyber Stalking?[10]

- Q9)** a) Write a short note on Indian IT act 2000 and amendments in 2008 [9]
b) Explain working of Proxy Servers and Anonymizers [9]

OR

- Q10)** a) What is DoS & DDoS Attacks? Explain with suitable examples? [9]
b) Write short note on any three: [9]
i) Nmap
ii) Wireshark
iii) Nikito
iv) Metasploit
v) Aircrack

