Total No. of Questions : 10]

SEAT No. :

P2056

[Total No. of Pages : 2

[5059]-661

B.E. (Information Technology)

INFORMATION AND CYBER SECURITY

(2012 Pattern) (Semester - I)

Time : 2.30 Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Answers Question 1 or 2, 3 or 4, 5 or 6, 7 or 8 and 9 or 10.***
2) ***Neat diagrams must be drawn whenever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Assume suitable data, if necessary.***

Q1) a) List and briefly define types of cryptanalytic attacks based on what is known to the attacker. **[6]**

b) Determine gcd (24140, 16762). **[4]**

OR

Q2) a) Using the extended Euclidean algorithm, find the multiplicative inverse of **[6]**

i) 1234 mod 4321

ii) 24140 mod 40902

b) What is the difference between a monoalphabetic cipher and a polyalphabetic cipher? **[4]**

Q3) a) What characteristics are needed in a secure hash function? **[6]**

b) In what order should the signature function and the confidentiality function be applied to a message, and why? **[4]**

OR

Q4) a) What are the properties a digital signature should have? **[6]**

b) What four requirements were defined for Kerberos? **[4]**

P.T.O.

Q5) a) Give examples of applications of IPSec. What services are provided by IPSec? What is the difference between transport mode and tunnel mode in IPSec? **[8]**

b) What protocols comprise SSL.Draw a neat diagram? What is the difference between an SSL connection and an SSL session? **[8]**

OR

Q6) a) What services are provided by the SSL Record Protocol? What steps are involved in the SSL Record Protocol transmission? **[8]**

b) What are three benefits that can be provided by an intrusion detection system? What is the difference between statistical anomaly detection and rule-based intrusion detection? **[8]**

Q7) a) What is cybersquatting. Who are cybersquatters and how does it work. **[8]**

b) What are social engineering attacks and classify and explain them? **[8]**

OR

Q8) a) What is cyberstalking. Explain cyberstalking and explain how it works. **[8]**

b) Classify and explain cybercrimes against property. **[8]**

Q9) Write notes on : **[18]**

a) Viruses

b) Worms and logic bombs

c) Botnets

OR

Q10 Write notes on : **[18]**

a) Cloud computing and cybercrimes

b) Indian legal perspective on cybercrimes

c) Software Piracy

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