Total No. of Questions : 10]

SEAT No. :

P3341

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[5461]-601

B. E. (Information Technology)
INFORMATION & CYBER SECURITY
(2015 Pattern) (Semester - I)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8, Q9 or Q10.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right side indicate full marks.***
4) ***Assume suitable data if necessary.***

Q1) a) Using the extended Euclidean algorithm, find the multiplicative inverse of **[5]**

i) 1234 mod 4321

ii) 24140 mod 40902

b) State with example Euler's theorem. **[5]**

OR

Q2) a) What is the difference between a monoalphabetic cipher and a polyalphabetic cipher? Explain with example. **[5]**

b) What four requirements were defined for Kerberos? **[5]**

Q3) a) What characteristics are needed in a secure hash function? **[5]**

b) What protocols comprise SSL? Draw a neat diagram? What is the difference between an SSL connection and an SSL session? **[5]**

OR

Q4) a) What services are provided by IPSec? What is the difference between transport mode and tunnel mode in IPSec? **[5]**

b) Consider any 5 threats to web security and describe how each is countered by particular feature of SSL **[5]**

i) Brute force attacks

ii) Known plaintext attacks

iii) Replay attacks

iv) Man-in-the-middle attacks

v) Password sniffing

vi) IP spoofing

vii) IP hijacking

viii) SYN flooding

P.T.O.

Q5) a) Illustrate with a neat diagram components of risk identification and risk assessment. **[8]**

b) List and explain approaches to reduce impact of vulnerability exploitation through planning and preparation. **[8]**

OR

Q6) a) List and explain any four commandments of computer ethics. **[8]**

b) Illustrate the significance of IRP, DRP and BCP. **[8]**

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

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

OR

Q8) a) What are social engineering attacks and classify and explain them? **[8]**

b) Explain in detail Indian legal perspective on cybercrimes. **[8]**

Q9) a) What is a phishing attack explain with an example. What are the different types of phishing? **[12]**

b) What is cyberstalking? Explain cyberstalking and explain how it works. **[6]**

OR

Q10)a) List any two network security scanners and explain the significance and working of the same. **[12]**

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

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