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Question Paper Code : X 60758

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2020
Seventh Semester

Computer Science and Engineering

IT 2352/IT 62/10144 IT 603/10144 CSE 46 – CRYPTOGRAPHY AND NETWORK
SECURITY

(Common to Sixth Semester – Information Technology)

(Regulations 2008/2010)

(Also Common to PTIT 2352 – Cryptography and Network Security for
B.E. (Part-Time) Seventh Semester – Computer Science and Engineering –
Regulations 2009)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

PART – A

(10×2=20 Marks)

1. Encrypt 'amma' using affine cipher with key (15, 20).
2. Find the value of $6^{10} \bmod 11$.
3. Differentiate between stream ciphers and block ciphers.
4. State few applications of RC4 algorithm.
5. What is one-way property ?
6. What are the two approaches of digital signature ?
7. List out the services provided by PGP.
8. Expand and define SPI.
9. What are the effects of malicious software ? Write any two.
10. What is 'Worm' ?



11. a) Write about any two classical crypto systems (substitution and transposition) with suitable examples.
(OR)
b) Write about Fermat and Euler's theorem in detail.
12. a) Write down the Triple DES algorithm and explain with neat diagram.
(OR)
b) Explain about the RSA algorithm with example as :
 $p = 11, q = 5, e = 3$ and $PT = 9$.
13. a) Explain ElGamal public key cryptosystems with an example. **(16)**
(OR)
b) Explain Secure Hash in detail. **(16)**
14. a) i) Explain – Kerberos authentication procedure. **(8)**
ii) Explain about electronic mail security. **(8)**
(OR)
b) i) Explain in detail about web security. **(8)**
ii) Brief – SSL and TLS. **(8)**
15. a) Explain about viruses in detail.
(OR)
b) Explain in detail about firewall.
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