

**B. Tech. Sem - VIII (Inf. Tech.) (2014 COURSE) (CBCS) :
SUMMER - 2019**

SUBJECT: 3) ELECTIVE – III NETWORK SECURITY & CRYPTOGRAPHY

Day: Saturday
Date: 01/06/2019

Time: 02.30 PM TO 05.30 PM
Max Marks. : 60

S-2019-2914

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Assume suitable data, if necessary.
- 4) Use of non programmable calculator is **ALLOWED**.
- 5) Draw neat and labeled diagrams **WHEREVER** necessary.

Q.1 Summarize need of network security. Discuss the relation between security mechanisms and attacks in detail. (10)

OR

Q.1 Write about Fermat and Euler's theorem in detail. (10)

Q.2 Describe the CNSS security Model, with its three dimensions. (10)

OR

Q.2 With suitable examples, distinguish between transposition cipher system and substitution cipher system. (10)

Q.3 Draw the structure of AES. Explain how Encryption and decryption is done in AES. (10)

OR

Q.3 Discuss the RSA algorithm in detail, with its computational aspects and security. (10)

Q.4 Briefly explain the different message authentication functions with neat diagram. (10)

OR

Q.4 Explain Digital signature with ElGamal public key cryptosystem with example. (10)

Q.5 Write in detail about definition, characteristics, types and limitations of Firewall. (10)

OR

Q.5 How will you enhance the ability of a system to defend against intruders and malicious program? (10)

Q.6 Illustrate the confidentiality and authentication service provided by PGP. (10)

OR

Q.6 Elaborate the architecture of IP Security with neat diagrams. (10)

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