**Roll No** ..................................

# IT-8001-CBGS

## B.E. VIII Semester

Examination, December 2020

# Choice Based Grading System (CBGS)

## Information Security

*Time : Three Hours*

*Maximum Marks : 70*

*Note:* i)    Attempt any five questions.

     ii)   All questions carry equal marks.

1. Define Euler's totient function and their applications.

2. a)   Briefly explain the idea behind elliptic curve cryptography.
   b)   What is Hash function? Give the basic use of Hash function.

3. a)   Explain web security and penetration testing.
   b)   What is packet filters and intrusion detection system?

4. a)   What is penetration testing?
   b)   What is firewall and its types?

5. a)   Explain detail Phishing attacks.
   b)   Explain Cross Site Scripting with example.

6. a) Briefly discuss about Email security.
   b) Write detail about types of Viruses.

7. Encrypt the message "meet at the airport" using the Hill cipher with the key $\begin{pmatrix} 9 & 4 \\ 5 & 7 \end{pmatrix}$. Show your calculation and the result.

8. Perform the encryption and decryption using RSA algorithm
   i) $p = 3; \ q = 11; \ e = 7; \ m = 5$
   ii) $p = 11; \ q = 13; \ e = 17; \ m = 8$

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