

**M. Tech.-II (Information Technology) (CBCS – 2015 Course) :**  
**WINTER - 2018**

**SUBJECT: INFORMATION SECURITY**

Day: Friday  
Date: 23/11/2018

**W-2018-3147**

Time: 11.00 AM TO 02.00 PM  
Max Marks. 60

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**N.B.**

- 1) All questions are **COMPULSORY**.
  - 2) Figures to the right indicate **FULL** marks.
  - 3) Answers to both the sections should be written in **SEPARATE** answer books.
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**SECTION - I**

**Q.1** Define affine cipher transformation Suppose that  $E(x) = 4x \text{ MOD } 26$ . (10)  
Determine cipher text alphabet.

**OR**

What is cryptanalysis? Define Fermat's Little theorem with suitable (10)  
example.

**Q.2** What is goal of intrusion detection system (IDS)? Enlist all possible (10)  
detections performed by IDS? What are advantages of Network IDS?

**OR**

- a) What are different security policies? (05)
- b) What are advantages and disadvantages of using honey pot approach? (05)

**Q.3** What is the role of information security department? Explain in detail. (10)

**OR**

Why are policies important? Who develop security policies? (10)

**SECTION - II**

**Q.4** Describe information security vulnerabilities that expose an organization to (10)  
risk.

**OR**

Describe at least five email threats and web threats. (10)

**Q.5** Describe key distribution is RSA cryptosystem. (10)

**OR**

What is primality test? What is pseudo prime? Find the smallest pseudo (10)  
prime to the base 3.

**Q.6** What are various phases of developing a business continuity plan? (10)

**OR**

Explain features of NISSUS and NMAP audit tools. (10)

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