

Tingting Zhang  
tel: 148878, mobile: 0736962242

## Examination of Network Security and Management, AV 2011

**Time: 2011-08-26**

**Total: 100**

**A: 90**

**B: 80**

**C: 70**

**D: 60**

**E: 50**

**Fail < 50**

**Good Luck**

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1. (20 p)  
List out categories of passive and active security attacks.
2. (20 p) What is 2DES? Is 2DES more secure than DES? Describe block structure of 3DES and compare with 2DES.
3. (20 p) Suppose that Alice has Bob's public key  $K_{pubb}$  and Bob has Alice's public key  $K_{puba}$ . How could Alice sign a message  $M$  and send it confidentially to Bob by using a hash function MD5?
4. (20 p) Suppose Alice and Code trust each other, they have each other's public key. Code and Bob share a secret key. Describe a process that create a secure channel and between Alice and Code.
5. (20 p) What is a private key ring in PGP? What is a public key ring in PGP?