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**EIGHTH SEMESTER**

Roll No. ....

**B.E. (IT)**

**MID SEM EXAMINATION**

**March**

**2007**

**IT-412 INFORMATION SECURITY**

**Time: 1 Hour 30 Minutes**

**Max. Marks : 20**

**Note : Answer ALL questions.**

**Assume suitable missing data, if any.**

- 1 Using S-DES, decrypt the string (10100010) using the key (1001110010). Show the intermediate results after each function. Use the following.

P 10									
3	5	2	7	4	10	1	9	8	6

P 8							
6	3	7	4	8	5	10	9

IP							
2	6	3	1	4	8	5	7

E/P							
4	1	2	3	2	3	4	1

P 4			
2	4	3	1

$$S_0 = \begin{bmatrix} 1 & 0 & 3 & 2 \\ 3 & 2 & 1 & 0 \\ 0 & 2 & 1 & 3 \\ 3 & 1 & 3 & 2 \end{bmatrix}$$

$$S_1 = \begin{bmatrix} 0 & 1 & 2 & 3 \\ 2 & 0 & 1 & 3 \\ 3 & 0 & 1 & 0 \\ 2 & 1 & 0 & 3 \end{bmatrix}$$

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- 2[a] What is playfair cipher? How many keys does a playfair cipher have? Use approximate power of 2. 2
- [b] Explain the term unicity. How does it affect entropy? 2
- [c] Explain the avalanche effect in DES. 2
- [d] Draw block diagram of single round of DES algorithm. 2
- 3[a] Calculate  $\{82\} \bullet \{87\} \oplus \{43\} \bullet \{6E\} \oplus \{46\} \oplus \{A6\} \bullet \{04\}$  2
- [b] What is  $\{01\}^{-1}$  in  $GF(2^8)$ .  
where  $\oplus$  is X-OR and  $(\bullet)$  is multiplication defined over  $GF(2^8)$ .  
Take suitable assumptions, if required. 4

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**EIGHTH SEMESTER**

**B.E. (IT)**

**MID SEM EXAMINATION**

**March 2007**

**IT-413 FINANCIAL & COST MANAGEMENT**

*Time: 1 Hour 30 Minutes*

*Max. Marks : 20*

**Note :** Answer **ALL** questions.  
All questions carry equal marks.  
Assume suitable missing data, if any.

- 1[a] Discuss three broad areas of financial decision-making.  
[b] Discuss the relationship of financial management to economics and accounting.
- 2[a] Critically evaluate the goals of maximisation of profit and maximisation of return on equity.  
[b] Discuss the risk-return trade in financial decisions.
- 3 What are the advantages and disadvantages of the following forms of business organisation :  
Sole proprietorship, partnership, cooperative society, private limited company and public limited company.
- 4[a] Explain the important functions performed by financial markets.  
[b] What is meant by equilibrium in financial markets?
- 5[a] What functions are performed by the Reserve Bank of India?  
[b] What are the principal tasks of the Securities Exchange Board of India?

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**EIGHTH SEMESTER**

**B.E. (IT)**

**MID SEM EXAMINATION**

**March** **2007**

**IT-414 INTELLECTUAL PROPERTY RIGHTS**

*Time: 1 Hour 30 Minutes*

*Max. Marks : 20*

**Note :** Answer **ALL** questions.  
All questions carry equal marks.  
Assume suitable missing data, if any.

- 1 Discuss the concept of property. What is property in the legal sense? What do you understand by the term Intellectual Property (IP)? Why is IP called a dynamic field?
- 2 List the IP instruments recognized under the TRIP's Agreement of the WTO? How does a trademark differ from (i) an industrial design, (ii) a geographical indication?
- 3 Discuss the nature of IP rights? Why does intellectual property need protection?
- 4 What are the underlying premises of the global IP regime? Do you agree with them?