UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, April 2018

Course: E-Payment System **Semester: VIII**
Program: B.Tech CSE(ECRA)
Time: 03 hrs. **Max. Marks: 100**

Instructions: Attempt all the questions from all three sections.

SECTION A

S. No.		Marks	CO
Q 1	Explain the nature of money with the help of an example?	4	CO1
Q 2	Discuss the role of RBI in Indian Economy?	4	CO2
Q 3	Differentiate between Token Vs notational money?	4	CO2
Q 4	Describe the process of Peer to peer payment Systems?	4	CO3
Q 5	Discuss the public key cryptography technique?	4	CO4
	SECTION B		
Q 6	Discuss the term Secure Electronic Transfer (SET) in respect of secure cryptography and how it safe from various attacks?	10	CO4
Q 7	Explain the various payment methods in the banking system and elaborate the uses of each of them.	10	CO2
Q 8	Explain the Electronic bill presentation and payment system (EBPP) with the help of a case study?	10	CO3
Q 9	You have found an old ciphertext, where you know that the plaintext discusses cryptographic methods. You suspect that a Vigenere cipher has been used and therefore look for repeated strings in the ciphertext. You find that the string TICRMQUIRTJR occurs twice in the ciphertext. The first occurrence starts at character position 10 in the text and the second at character position 241 (we start counting from 1). You make the inspired guess that this ciphertext sequence is the encryption of the plaintext word cryptography. If this guess is correct, what is the key?	10	CO4
	OR		
	For a fast encryption in RSA it is popular to use e = 3. Although RSA is considered a secure public-key cryptosystem, the implementations of RSA can made encryption completely insecure. Justify this statement with proper explanation?	10	CO4
	SECTION-C		
Q 10	Explain the following terms with the help of a case a) Digital Wallets b) Cash and real Money c) Fiduciary Vs Scriptural Money d) Indian banking System and Foreign Exchange	 5 5 5 5	 CO3 CO1 CO1 CO2

Q 11	a) Explain the various properties of money and Electronic payment System. b) Differentiate between credit card Vs debit card and explain the various security checks on the both the cards? c) Describe the smart card architecture with all its features?	**6** **8** **6**	**CO1** **CO2** **CO3**
	OR		
	a) Factor the RSA number n = 3844384501 using the knowledge that 311776118522 ≡ 1 (mod 3844384501). 7 b) Prove that the number 31803221 is not a prime number using the hint 2 31803212 ≡ 27696377 (mod 31803221).	**10** **10**	**CO4**