

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May 2019

Programme Name: B.Tech. CS+ECRA

Semester : VI

Course Name : E-Payment System for E-Commerce

Time : 03 hrs

Course Code : CSIT 322

Max. Marks : 100

Nos. of page(s) : 02

Instructions: Attempt all questions.

SECTION A

S. No.		Marks	CO
Q 1	Explain the reasons behind finding difficulty to categorize e-commerce models?	[4]	CO1
Q 2	Assess the requirement of credit cards within the scope of the e-payment systems?	[4]	CO3
Q 3	Elucidate the factors that differentiate the 3 modes of internet banking payment namely RTGS, NEFT and IMPS?	[4]	CO4
Q 3	Categorize the different players in an e-commerce system	[4]	CO1
Q 4	Explain the components of EDI with the aid of a diagram.	[4]	CO2

SECTION B

Q 5	<p>State whether these statements are TRUE or FALSE :</p> <ol style="list-style-type: none">1) Non-repudiation is achieved by security relevant activities on an e-commerce system that can be traced back to individuals who can be held responsible for their actions.2) Backdoors are created by hackers.3) Fake security and misleading applications or programs are known as scareware.4) A passive attack attempts to alter system resources or affect their operation when an e-payment transaction has occurred.5) Threat is any potential event or act, whether deliberate or accidental that would cause harm to the assets.6) A masquerade involves the passive capture of data and its subsequent retransmission to produce an unauthorized effect.7) Customized products/services are possible in e-commerce8) EBay is the specialty consumer auction market9) Easier information access in real-time is known as ubiquity.10) Smart credit cards can be used without relationship-based	[10]	CO1, CO2
Q 6	Elucidate using network architecture the SET protocol for credit card payment and the digital signature process involved for cardholder and merchant both	[10]	CO4

Q 7	<p>a) Would you say that Amazon and eBay are direct or indirect competitors? Justify your logic giving relevant reasons.</p> <p>b) FILL IN THE BLANKS:</p> <p>1) The multiplicative inverse of 17 in Z_{25} is _____.</p> <p>2) Structure of EDI transaction in an EDI message consists of transaction set, _____ and data elements.</p> <p>3) _____ refers to unauthorized access to or interception of data.</p> <p>4) E-cheque is based on the _____ security feature.</p> <p>5) Micro payments are good through _____ cards.</p>	[5]	CO2
Q 8	<p>a) Explain the 3-tier architecture of an e-commerce with the aid of a diagram.</p> <p>b) Which of these options is correct (ONLY one is CORRECT) :</p> <p>1. Encryption and decryption provide secrecy, or confidentiality, but not a) Integrity b) Authentication c) Privacy d) All of these</p> <p>2. Message digest in an e-payment secure transaction needs to be a) Public b) Private c) kept secret d) None of these</p> <p>3. EDI is necessary in _____ a) B2C b) C2C c) B2B d) Commerce using Internet</p> <p>4. Which of these forms the basis for the classification of cryptographic algorithms a) Secrecy of algorithms, Number of keys, key size, Symmetry of process b) Usage statistics, Number of keys, key size, OS specification c) Secrecy of algorithms, ciphertext alphabets, Usage statistics, key size d) Plaintext alphabets, Number of keys, key size, Symmetry of process</p> <p>5. The common name used for crime of stealing password is called a) Spooling b) Spoofing c) Polling d) None of these</p>	[5]	CO2
OR			
Q 8	<p>a) Elucidate the types of B2B Models</p> <p>b) Analyze the categories of auction in B2C with examples for each type.</p>	[5]	CO2
SECTION-C- Attempt ANY ONE Question in this Section (25 MARKS)			
Q 9	<p>a) Find $15^{-1} \pmod{26}$ using Extended Euclidean Algorithm.</p> <p>b) Compute the gcd(80808, 31863) using Euclidean algorithm</p> <p>c) Find particular and general solutions to the linear equation $25x + 10y = 15$</p> <p>d) Obtain a single value of x that satisfies the following four congruences : $x \cong 4 \pmod{10}$ $x \cong 6 \pmod{13}$ $x \cong 4 \pmod{7}$ and $x \cong 2 \pmod{11}$</p>	[5]	CO5
Q 10	<p>a) Compare the 4C payment methods, namely Cash, Credit card, Cheque and Credit/debit i.e. direct fund transfer</p> <p>b) Explain the key security threats in the e-commerce environment, clearly focusing on the impact of each of these threats to e-payment technologies</p> <p style="text-align: center;">OR</p> <p>a) Analyze the purpose of firewalls, and the major methods they use to validate traffic</p> <p>b) Elucidate how public key cryptography works for e-payment systems using digital signatures and hash digests.</p>	[10]	CO3
		[10]	CO4
		[10]	CO4
		[10]	CO3

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SECTION A

S. No.		Marks	CO
Q 1	Analyze the major players in an industry value chain and how are they impacted by e-commerce technology?	[5]	CO2
Q 2	Elucidate three major differences between B2B, C2C and B2C model in a tabular form	[5]	CO1
Q 3	State advantages of using online fund transfer services such as NEFT, RTGS, IMPS.	[5]	CO3
Q 4	“An electronic payment system should have basic requirements assessed”. Explain each of these requirements	[5]	CO3

SECTION B

Q 5	a. E-commerce has the potential for changing business in three major areas. Elucidate these areas..	[5]	CO1
	b. FILL IN THE BLANKS: 1) The multiplicative inverse of 17 in Z ₂₅ is _____. 2) Structure of EDI transaction in an EDI message consists of transaction set, _____ and data elements. 3) _____ refers to unauthorized access to or interception of data. 4) E-cheque is based on the _____ security feature. 5) Micro payments are good through _____ cards.	[5]	CO3
Q 6	a) Examine the experience of shopping on the Web versus shopping in a traditional manner. Imagine that you have decided to purchase a digital camera (or any other item of your choosing). First shop for the camera in a traditional manner. Describe how you would do so (for example, how you would gather the necessary information you would need to choose a particular item, what stores you would visit, how long it would take, prices, etc.). Next, shop for the item on the Web. Compare and contrast your experiences. What were the advantages and disadvantages of each? Which did you prefer and why?	[6]	CO3
	b) Elucidate the Virtual markets in Business-Oriented E-Commerce?	[4]	CO2

Q 7	a) Elucidate buy-side, sell-side and marketplace-based e-commerce? Give examples for each type to support your answer. b) Elucidate the three different stages in the evolution of e-commerce	[5]	CO2
		[5]	CO1
Q 8	Analyze the five security services with examples for each. Also state and explain the security mechanisms used for each security service	[10]	CO4
OR			
Q 8	Elucidate authentication in e-commerce and its various methods. In this context, explain public key infrastructure and digital certificate as well as its format.	[10]	CO4
SECTION C			
Q 9	a) Compute $23^{-1} \pmod{100}$ using Extended Euclidean Algorithm. b) Compute the $\gcd(40404, 95589)$ using Euclidean algorithm c) Find particular and general solutions to the linear equation $14x + 21y = 77$ d) Obtain a single value of x that satisfies the following four congruence : $x \cong 4 \pmod{10}$ $x \cong 6 \pmod{13}$ $x \cong 4 \pmod{7}$ and $x \cong 2 \pmod{11}$	[5]	CO5
		[5]	CO5
		[5]	CO5
		[5]	CO5
Q 10	a) Analyze how secure electronic transaction systems work for credit card, throwing light on the algorithms and technology used as well as architecture. b) Elucidate the major e-commerce payment systems in use today OR a) Elucidate the working of public key cryptography using digital signatures and hash digests. b) Elucidate the various type of funds transfer which take place and the Procedure and time period for eac fund transfer	[10]	CO4
		[10]	CO3
		[10]	CO4
		[10]	CO3