Benha University
Faculty of Computers and Information
Department: IS
Final Exam Fall 2016

Subject: E-Commerce
Level-year: 4th Level
Time allowed: 3 Hour
Full Mark: 65

Answer all of the following questions

Question 1: MCQ (30 marks)

In your answer sheet draw a table like the one below and put your answer into it.

1	2	3	4	5	6	7	8	9	10
B	D	B	B	A	C	A	D	C	D
11	12	13	14	15	16	17	18	19	20
C	A	C	A	B	A	C	B	B	A
21	22	23	24	25	26	27	28	29	30
D	B	D	C	B	D	D	A	A	B

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Question 2 short essay questions (20 marks)

1- Briefly describe the functionality of digital wallet (4 marks)

FUNCTION	DESCRIPTION
Authentication	Confirms identities via digital certificates, SET, or other forms of encryption.
Processing of payments	Pays bills via alliances with credit card associations and banks.
Privacy/password management	Helps customers control their digital environments, PINs, card numbers, and passwords in a secure product.
Receipt management	Reviews all transactions at a single source.
Bill presentment	Presents and pays bills at a single location.
Loyalty programs	Participates in and manages loyalty points at a single location.
Coupon delivery/discounts	Coordinates merchant promotions through a single wallet.
Spending allowances	Establishes e-allowances.
Micropayments	Makes payments under $5 anywhere on the Web based on credit cards.
Integration with other software	Links to taxation software, personal budgets, personal devices, and wireless software.

2- Describe the SET protocol. (4 marks)

a. Developed to address deficiencies in online credit card use. Open standard developed by MasterCard and Visa.
b. Authenticates cardholder and merchant identity through use of digital certificates.
c. Transaction process similar to standard online credit card transaction, with identity verification.
d. Thus far, has not caught on much, due to costs involved in integrating SET into existing systems, and lack of interest among consumers
e. SET uses SSL and PKI. Customer must have a SET enabled browser and merchant needs SET enabled server.
f. Consumer's credit card issuing bank issues a digital certificate (electronic wallet) with consumer's public key and bank's public key (signed with bank's private key).
g. Merchants get a similar digital certificate from bank.

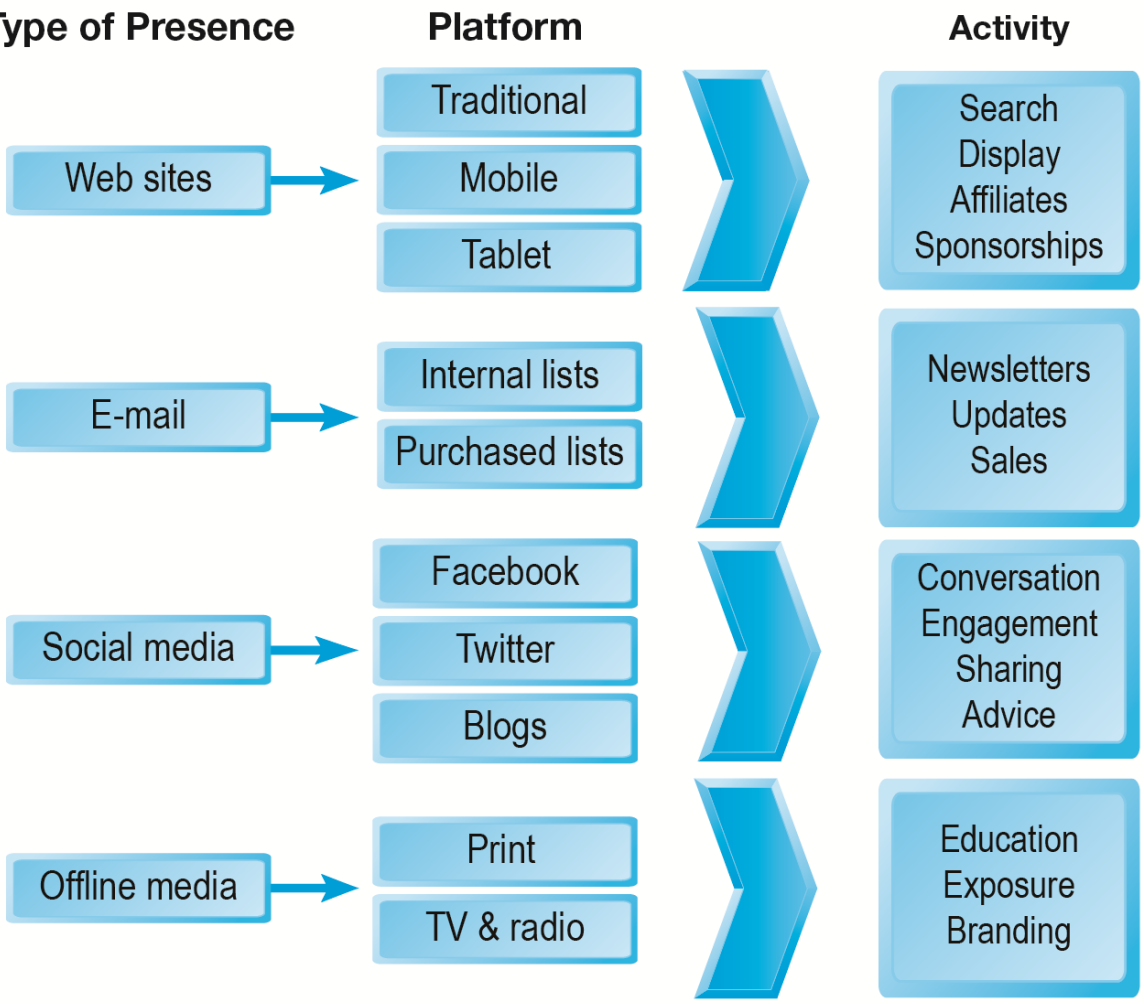
3- Briefly describe the functionalities provided by an e-commerce web server (4 marks)

FUNCTIONALITY	DESCRIPTION
Processing of HTTP requests	Receive and respond to client requests for HTML pages
Security services (Secure Sockets Layer)/ Transport Layer Security	Verify username and password; process certificates and private/public key information required for credit card processing and other secure information
File Transfer Protocol	Permits transfer of very large files from server to server
Search engine	Indexing of site content; keyword search capability
Data capture	Log file of all visits, time, duration, and referral source
E-mail	Ability to send, receive, and store e-mail messages
Site management tools	Calculate and display key site statistics, such as unique visitors, page requests, and origin of requests; check links on pages

4- Briefly describe the eight most important factors in e-commerce web site design (4 marks)

FACTOR	DESCRIPTION
Functionality	Pages that work, load quickly, and point the customer toward your product offerings
Informational	Links that customers can easily find to discover more about you and your products
Ease of use	Simple fool-proof navigation
Redundant navigation	Alternative navigation to the same content
Ease of purchase	One or two clicks to purchase
Multi-browser functionality	Site works with the most popular browsers
Simple graphics	Avoids distracting, obnoxious graphics and sounds that the user cannot control
Legible text	Avoids backgrounds that distort text or make it illegible

5- Using a graph, illustrate the concept of e-commerce presence map(4 marks)



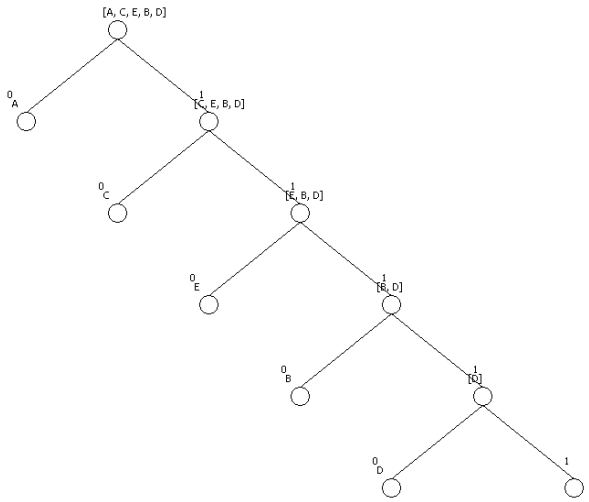
Question 3: E-commerce server side management techniques (15 marks)

Assume you are given a file containing the following set of data **AACABABBADACCECDDEEE** and you are instructed to keep their space on your server as minimum as possible

1- **Apply RLC and calculate the CR (3 marks)**
2A1C1A1B1A2B1A1D1A2C1E1C2D3E (28 bytes)
CR= ((20-28)/20) * 100 = -40%

2- **Apply VRLC and calculate the CR (4 marks)**

A	**0**
C	**10**
E	**110**
B	**1110**
D	**1111**



Coded string: 00100111001110111001111010101101011111111110110110 **(50 bits)**

CR= ((160-50)/160) * 100 = 68 %

3- Apply LZW and calculate the CR (5 marks)

S	C	Output	Code	String
			1	A
			2	C
			3	B
			4	D
			5	E
A	A	1	6	AA
A	C	1	7	AC
C	A	2	8	CA
A	B	1	9	AB
B	A	3	10	BA
A	B			
AB	B	9	11	ABB
B	A			
BA	D	10	12	BAD
D	A	4	13	DA
A	C			
AC	C	7	14	ACC
C	E	2	15	CE
E	C	5	16	EC
C	D	2	17	CD
D	D	4	18	DD
D	E	4	19	DE
E	E	5	20	EE
E	E			
EE		20		

Coded : 112139104725244520 (18 bytes)
CR= ((20-18)/20)*100 = 10%

4- Which of the three techniques is most suitable for your case? Explain your answer? (3 marks)
VRLC depending on the nature of the input stream