B.Com. VI Semester  
**Paper Title: E-Commerce**  
**Paper Code: AS-2645**  
*(Prepared by Mr. Amit Manglani, Assistant Professor, Department of Commerce, GGV)*

Note: These model answers are a depiction of important points which, an examinee must have to mention, to secure high marks in particular question. The length of the answer may vary as per the examinee’s understanding, interpretation, and his/her ability to comprehend the content.

**Section – A (Short Answer Type Questions)**

1. (i) **E-Commerce Opportunities for industries:**  
   In answer to this question, an examinee should briefly mention about E-commerce opportunities for Financial services, Stock Trading, Banking, legal and professional services, tour and travels, and for healthcare. Suitable examples can add up the marks.

(ii) **‘B2B’ Module:**  
   B2B is that model of E-commerce whereby a company conducts its trading and other commercial activity through the internet and here, customer is another business itself. In simple reference ‘B2B’ module of e-commerce facilitates trading between two companies through internet. Some popular B2B models are : Sale of Capital goods (machinery etc.) by a large manufacturer to small industries. For e.g. : Jindal steel selling its steel products to various industries in India.

(iii) **Four criteria for Digital Payment requirements:**  
   - (1) Acceptability  
   - (2) Anonymity  
   - (3) Convertibility  
   - (4) Efficiency  
   - (5) Integration  
   - (6) Scalability  
   - (7) Security  
   - (8) Reliability  
   - (9) Usability
(iv) **Disadvantages of Credit Cards:**

1. Relatively high transaction cost
2. They cannot be used directly by individuals to make payment to other individuals
3. Protecting the security of transaction is vital in the virtual world, transaction through credit cards require greater details which may be unsecured at any points.

(v) **Cryptography:**

Cryptography is the science of encrypting and decrypting the message. It relies on two basic components – an algorithm, and a key. Then, examinee can explain about the algorithm and about a key.

(vi) **Secure Electronic Transaction (SET):**

It is a messaging protocol designed by VISA and Mastercard for securing credit card transactions over open networks (like, the internet). It consists of 03 important functionaries: The Customer, The Merchant, and The Merchant’s Bank.

(vii) **Viruses:**

A virus is a small program that inserts itself into other program files that then become ‘infected’. It spreads when an infected program is executed or operated by the user. Thereafter, it further infects other programs. A virus attack results into inability to boot the computer system, deletion of files or the whole data from a hard-disk etc.

(viii) **Need of ‘Firewall’:**

Firewall is one of the advantageous software that helps prevent the infection of organisations’ network and services from unsolicited external activities of the internet. Following points can be attributed to need of firewall:

1. Controlled access to site system
2. Concentrated Security
3. Enhanced Privacy
4. Need for Usage Statistics on network
5. Protection from vulnerable services, and
6. Policy enforcement
(ix) **Four wireless applications devices:**
Wireless simply means interaction between two devices without wires or cables. It is a broad term that encompasses all sorts of wireless technologies and devices, including cellular communications. Some of the basic wireless application devices are:

1. Cellular phones  
2. Remote Controls  
3. Wireless Keyboards,  
4. Personal Digital Assistants (PDAs),  
5. Wireless routers, etc.

(x) **Features of 4G Wireless Communication:**
4G stands for the Fourth Generation of mobile telecommunications technology succeeding 3G. Some of its features are:

1. Good for data transfer (minimum speed: 100 Mbit/Sec.)  
2. Uses Orthogonal Frequency Division Multiplexing (OFDM)  
3. Data transfer rate from 100Mbps to 1Gbps  
4. Frequency range is 2 – 8 GHz, etc.

**Section – B (Long Answer Type Questions)**

2. **E-Commerce; Advantages and Disadvantages:**
E-Commerce is extending of trading and business services to the world through virtual world of wired and wireless connections of internet. It should be noted that though it is a virtual world, the transaction happens in reality.

In other words, E-Commerce provides extended avenues to the businesses and trading opportunities to reach to larger customer base.

Advantages: An examinee should explore about following advantages of e-commerce:

1. Round the clock operations  
2. Global reach  
3. Cost of acquiring, serving and retaining customers  
4. Easy to build extended enterprise  
5. Removes middlemen – Disintermediation
(6) Improved customer services  
(7) Economies of large-scale production and selling, etc.

Disadvantages: An examinee should write about following disadvantages of e-commerce in good detail:

(1) Not good for certain categories of products  
(2) Less technology and computer penetration across locations  
(3) Requirement of well qualified staff  
(4) Difficulty in integrating databases  
(5) Cultural and legal obstacles across countries  
(6) Customers’ apprehension on use of card details over the internet, etc.

3. Designing E-payment System:  
The examinee shall have to explain about the E-payment system and then have to express the hurdles that have to be taken care of before designing any such e-payment system, like: Privacy, Security, Intuitive interface, Database integration, brokers, pricing, and standards to be adopted.

4. Working of Digital Signature Technology:  
After defining the digital signature, the examinee needs to detail about the cryptography, its components – algorithm and key. Thereafter, should detail a little about symmetric and asymmetric key crypto system, and about hash function. The examinee need to explain following points in order to answer this question:

(1) Digital Signature Creation  
(2) Digital Signature Verification  
(3) Signer Authentication  
(4) Document Authentication  
(5) Affirmative Act, and  
(6) Assurance

5. Information Security System, its goals and methods of its violation:  
Every type of business needs security. This becomes an important parameter for online business as customer will only rely on online transaction when the information security system is adequately placed at
its place and functioning properly. Any security system should have following three goals:
Confidentiality
Availability, and
Integrity
A proper diagram of showing relationship between these could be shown.

**Ways of security violations:**
Following are the ways by which security of any system can be violated:

1. Interrupt the data and cut it off.
2. Intercept the data with the intent of spying on it.
3. Interrupt the data and modify it and send a different data to the receiver.
4. Obstruct the data and fabricate new data and send it to the receiver.

![Diagram showing normal flow, interruption, interception, modification, and fabrication](image)

6. **M-Commerce, its categories:**
   Simply putting, electronic commerce conducted on mobile phones are categorised as m-commerce. The phrase mobile commerce was originally
coined in 1997 to mean "the delivery of electronic commerce capabilities directly into the consumer’s hand, anywhere, via wireless technology." Many choose to think of Mobile Commerce as meaning "a retail outlet in your customer’s pocket." According to BI Intelligence in January 2013, 29% of mobile users have now made a purchase with their phones.

**Mobile Commerce Categories:**

m-commerce activities can be grouped into two categories:

- Mobile browser-based m-commerce, which delivers Web sites optimized for mobile devices with which the consumer interacts using the mobile device’s Web browser. Customers browse, search, research, select, save, and purchase from a retailer in much the same manner as through the retailer’s e-commerce Web site. The major difference is that the interface is optimized for the resolution and display space available on the mobile device.

- Application-based m-commerce, which relies on applications that are downloaded to and run natively on a smartphone or other mobile device. Customers browse, search, research, select, save, and purchase from a retailer using the application and within the environment created by the application. The application is tied to the retailer’s IT systems through an application programming interface (API), through which content and shopping information is communicated to the consumer and order and customer information is integrated with the retailer’s systems.

7. **Google Chrome:**

The examinee should detail about what is a web browser first and then to explain important features of Google Chrome web browser. For example, An internet browser is a software application that enables the user to browse the World Wide Web, locate and access web pages. Browsers translate HTML code, allowing the users to read text, view images, watch videos and listen to audio clips on the website.

Google Chrome was started as ‘chromium’ project of Google to provide a new kind of web browsers to the public which can support the features of web 2.0 contents. Some of the promising features of Google chrome are:

(1) Task Manager for websites
(2) Super-clean menu
(3) Tabbed browsing
(4) Support for multiple languages
(5) Availability of wide-range of small programs, games which can be operated from chrome itself. E.g.: Angry birds
(6) Search from the address bar itself
(7) Download Manager
(8) Spellcheck support

All such features have made Google Chrome World’s most liked web browser now-a-days.

8. **Detailed note on an e-commerce website operating in India:**
The main idea of giving this question is to identify that how many students have seriously prepared their project on E-commerce given in the course curriculum. The question is simply asking from student to detail his/her work on project to reproduce here as an answer.

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