E-COMMERCE

Unit 14: Fundamental of E-Commerce

 Introduction to Electronic Commerce: Introduction of commerce, Electronic commerce framework, electronic commerce and media convergence, the anatomy of e-commerce application.

 The Network for Electronic Commerce: Need of network, market forces influencing the I-way, components of I-way, network access equipment, and global information distribution network.

 The Internet as a Network Infrastructure: Introduction, the Internet terminology, NSFNET: Architecture and Components, Internet governance: The Internet Society.

Network Security & Firewalls: Client-Server network security, security threats in client-server, firewalls and network security, data & message security, encrypted documents and electronic mail.

 Electronic Commerce & World Wide Web: Introduction, architectural framework for electronic commerce, WWW as an architecture, security in the web.

 Consumer Oriented Electronic Commerce: Introduction, consumer oriented application, mercantile process models, mercantile models from the consumer's perspective, mercantile models from the merchant's perspective.

 Electronic Payment Systems: Introduction, types of electronic payment system, digital token based electronic payment systems, smart cards and electronic payment systems, credit cards systems, Threat on electronic payment system.

 Inter-organizational Commerce & Electronic Data Interchange: Introduction, EDI application in business, EDI: legal, security, and privacy issues, EDI and electronic commerce.

 The Corporate Digital Library: Introduction, dimensions of electronic commerce systems, types of digital documents, Issues behind document infrastructure, corporate data warehouses.

Electronic Commerce:

➢ Electronic commerce, commonly known as E-commerce is trading in products or services using computer networks, such as the Internet.

➢ Electronic commerce draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems.

➢ Modern electronic commerce typically uses the World Wide Web for at least one part of the transaction's life cycle, although it may also use other technologies such as e-mail.

Electronic Commerce:

➢ Sharing business information, maintaining business relationships and conducting business transactions using computers connected to telecommunication network is called E-Commerce.

Electronic Commerce:

1. Electronic Markets

➢ Present a range of offerings available in a market segment so that the purchaser can compare the prices of the offerings and make a purchase decision.

➢ Example: Airline Booking System

Electronic Commerce:

2. Electronic Data Interchange (EDI)

- It provides a standardized system
- Coding trade transactions
- Communicated from one computer to another without the need for printed orders and invoices & delays & errors in paper handling
- It is used by organizations that a make a large no. of regular transactions

Example: EDI is used in the large market chains for transactions with their suppliers

Electronic Commerce:

3. Internet Commerce

• **It is use to advertise & make sales of wide range of goods & services.**
• **This application is for both business to business & business to consumer transactions.**

Example: The purchase of goods that are then delivered by post or the booking of tickets that can be picked up by the clients when they arrive at the event.

Advantages of E-commerce:

- ✓ E-commerce enables fast and secure shopping.
- ✓ It is making digitalized world.
- ✓ E-commerce also enables to choose different goods and services according to your choice.
- ✓ It is a simple way of selling and buying products and services.
- ✓ E-commerce replaced the paper work as all transactions are through internet today.
- ✓ It provides better management system, as it has a centralized database.
- ✓ E-commerce via internet covers a large number of customers worldwide.
- ✓ E-commerce has several payment modes

Disadvantages of E-commerce:

- ✓ E-commerce has no universal standard for quality and reliability.
- ✓ E-commerce works through internet, it is possible that navigation on internet itself may be slow.
- ✓ Strong security is required in e-commerce as all transactions are through internet.
- ✓ There is high risk of buying unsatisfactory products through e-commerce.
- ✓ It uses public key infrastructure which is not safe.
- ✓ Customers also trap in banking fraud which is quite frequent.
- ✓ Hackers also try to get access of data or to destroy data in e-commerce.

Uses of E-commerce :

❖ **Online retail:** One of the most well-known uses of e-commerce is online retail, where businesses sell products directly to consumers through their online store, website, or mobile app.

❖ **Digital products and services:** E-commerce is also commonly used for the sale of digital products and services, such as music, e-books, software, and online courses.

❖ **Business-to-business transactions:** E-commerce can be used for B2B transactions, where businesses sell products or services to other businesses.

❖ **Online marketplaces:** E-commerce marketplaces, such as Amazon and eBay, provide a platform for businesses and individuals to sell their products to a large audience.

Uses of E-commerce :

❖ **Auction sites:** Online auction sites, such as eBay, allow users to bid on and purchase items from other users.

❖ **Online banking and financial services:** E-commerce is used extensively for online banking and financial services, including payment processing, bill payment, and money transfers.

❖ **Online booking and reservations:** E-commerce is used for booking and reservations of flights, hotels, rental cars, and other travel-related services.

❖ **Food delivery:** E-commerce platforms are used for online ordering and delivery of food from restaurants.

❖ **Online advertising:** E-commerce is also used for online advertising, where businesses can advertise their products and services to a large audience.

Types of E-commerce model:

There are types of e-commerce models that can describe almost every transaction that takes place between consumers and businesses.

1. Business to Consumer (B2C): When a good or service is sold to an individual consumer by a business, e.g., we buy a pair of shoes from an online retailer.
2. Business to Business (B2B): When a good or service is sold by a business to another business, e.g., a software-as-a-service is sold by a business for other businesses to use.
3. Consumer to Consumer (C2C): When a good or service is sold by a consumer to another consumer, e.g., we sell our old furniture on eBay to another consumer.

Types of E-commerce model:

4. **Consumer to Business (C2B):** When a consumer's own products or services is sold to a business or organization, e.g., an authority offers exposure to their online audience in exchange for a fee or a photographer licenses their photo for a business to use.
5. **Business-to-government (B2G):** In this model, businesses sell products or services to government agencies through online portals or marketplaces.
6. **Government-to-business (G2B):** In this model, government agencies sell products or services to businesses through online portals or marketplaces.
7. **Government-to-consumer (G2C):** In this model, government agencies provide products or services directly to consumers through online portals or marketplaces.

The network infrastructure of E-commerce:

Network infrastructure is required for e-commerce to transport content. I-way is a high-capacity, interactive electronic pipeline used to transfer content in case of ecommerce. I-way can transfer any type of context like, text, graphics, audio, video.

In other words, multimedia contents are easily transported through I-way.

Components of I-way: -

A. Consumer access equipment. –
B. Local on-ramps, and -
C. Global information distribution networks.

The network infrastructure of E-commerce:

1. **Consumer Access Equipments:**

• These are the devices at consumer end and enables consumers to access the network. It consists of hardware and software.

• Hardware component includes devices such as computers, modems, routers, switches etc. for computer networks, set-top boxes, TV signal descramblers etc. for television networks, Cell phones etc. for cellular networks and so on.

• And software systems installed in those hardware devices includes browsers, operating systems etc.

The network infrastructure of E-commerce:

2. Access Roads/Media (Local on Ramps)

• These are the network infrastructure that provides linkage between businesses, homes, and schools to global information distribution network. This component is often called the last mile in telecommunication industry.
• Access road providers can be divided into four categories: Telecom based, Cable TV based, Wireless based, and Computer based online systems.
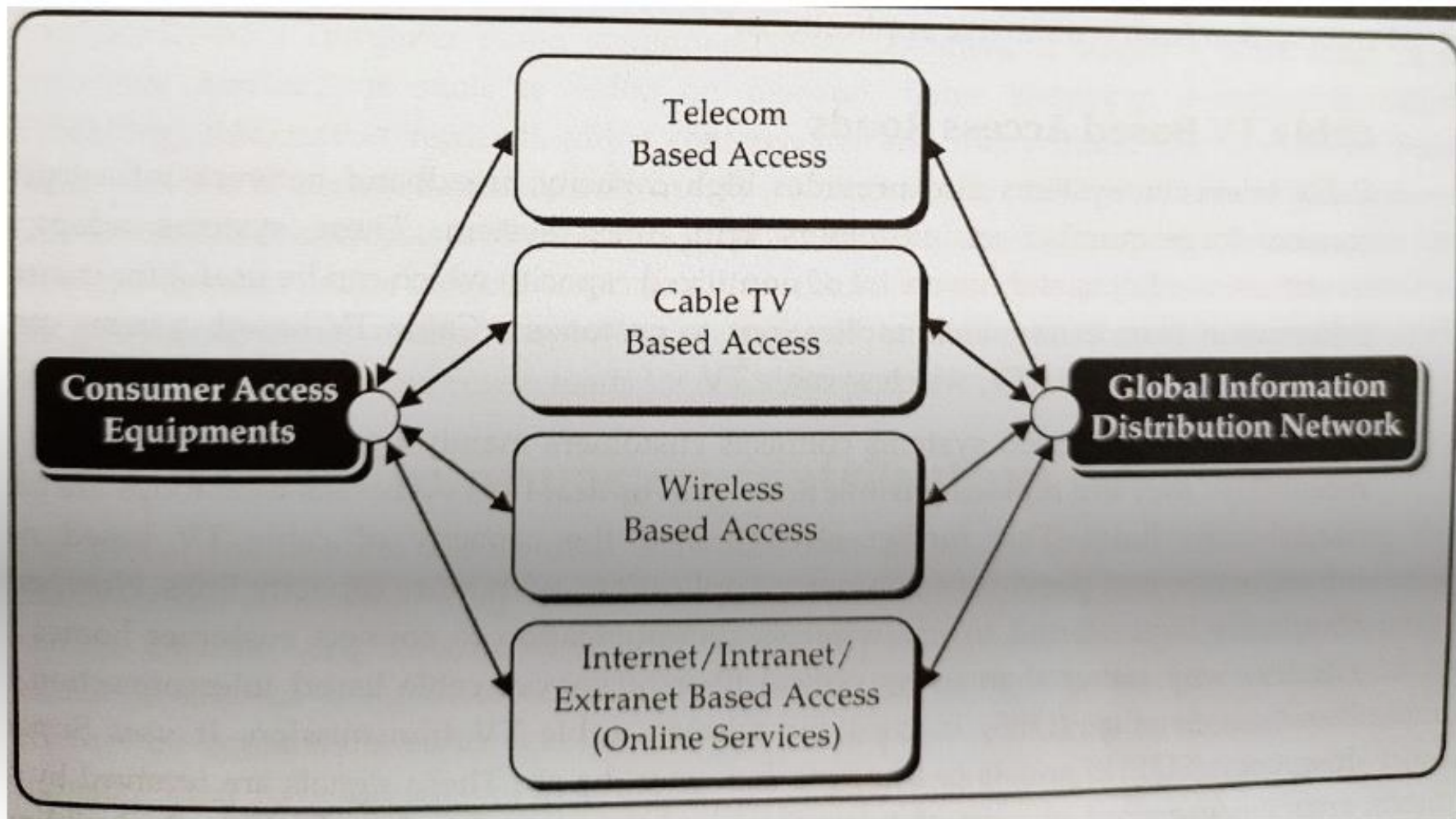• Main function of access roads is to connect consumers with e-commerce applications.

GIDN (Global Information Distribution Network)

• The global information distribution networks consist of the infrastructure crossing the countries and continents.

• They include the long-distance telephone lines, satellite networks, and the internet. Long distance telephone connectivity is provided through cable by the inter-exchange carriers.

• Long distance cellular networks are using the wireless technologies to connect the consumers worldwide.

• Satellite networks play a vital role in the communication industry. They have advantages over the terrestrial networks in that:

❖ They are accessible from any point of the globe.

❖ They can provide broad band digital services to many points without the cost of acquiring wire/cable installation.

❖ They can add receiving and sending sites without significant additional costs.

Consumer Access Equipments

Telecom Based Access

Cable TV Based Access

Wireless Based Access

Internet/Intranet/ Extranet Based Access (Online Services)

Global Information Distribution Network

Hypertext Publishing:

Hypertext Publishing Web provides a functionality necessary for e-commerce. The web has become an umbrella for wide range of concepts and technology that differ markedly in purpose and scope which include hypertext publishing concept, the universalreader concept and the client server concept.

Hypertext publishing promotes the idea of seamless information world in which all online information can be accessed and retrieved. In a constant and simple way hypertext publishing is a primary application of web interest in hypermedia. On the internet (called distributed or global hypermedia).

Security on the web

The frequency and sophistication of cyber attacks has skyrocketed in recent years. Ecommerce security refers to the measures taken to protect your business and your customers against cyber threats.

✓ **Payment Card Industry Data Security Standard (PCI DSS):** PCI DSS (often referred to as just "PCI") is an industry standard that ensures credit card information collected online is being transmitted and stored in a secure manner.

Security on the web

- ✓ **International Organization for Standardization (ISO):**

- ✓ **ISO is an international standard-setting body that creates requirements that guide businesses in making sure their products and processes are fit for purpose. One of their standards, ISO/IEC 27001:2013, covers data security. Achieving this certification means a business has high quality management systems, data security, risk-aversion strategies and standardized business practices.**

Security on the web

- ✓ **Personal Data:**
- ✓ **Personal data or personal information refers to any data that can be linked back to a specific individual most simply, this includes names, email addresses, and phone numbers. But it can get a little bit more complex as well. Any data set even scrubbed of specific names or numbers that can identify a particular person is considered personal data. Protecting personal data is particularly important when it comes to data privacy regulations like GDPR.**

Security on the web

- ✓ **Transport Layer Security (TLS), Secure Sockets Layer (SSL) and HTTPS authentication: Utilizing SSL helps to authenticate and encrypt links between networked computers. Once you have an SSL certificate for your ecommerce site, you can move from HTTP to HTTPS, which serves as a trust signal to customers that your site is secure.**

- ✓ **Multi-factor authentication (MFA), 2-factor authentication (2FA), or 2-step verification(2SV):**
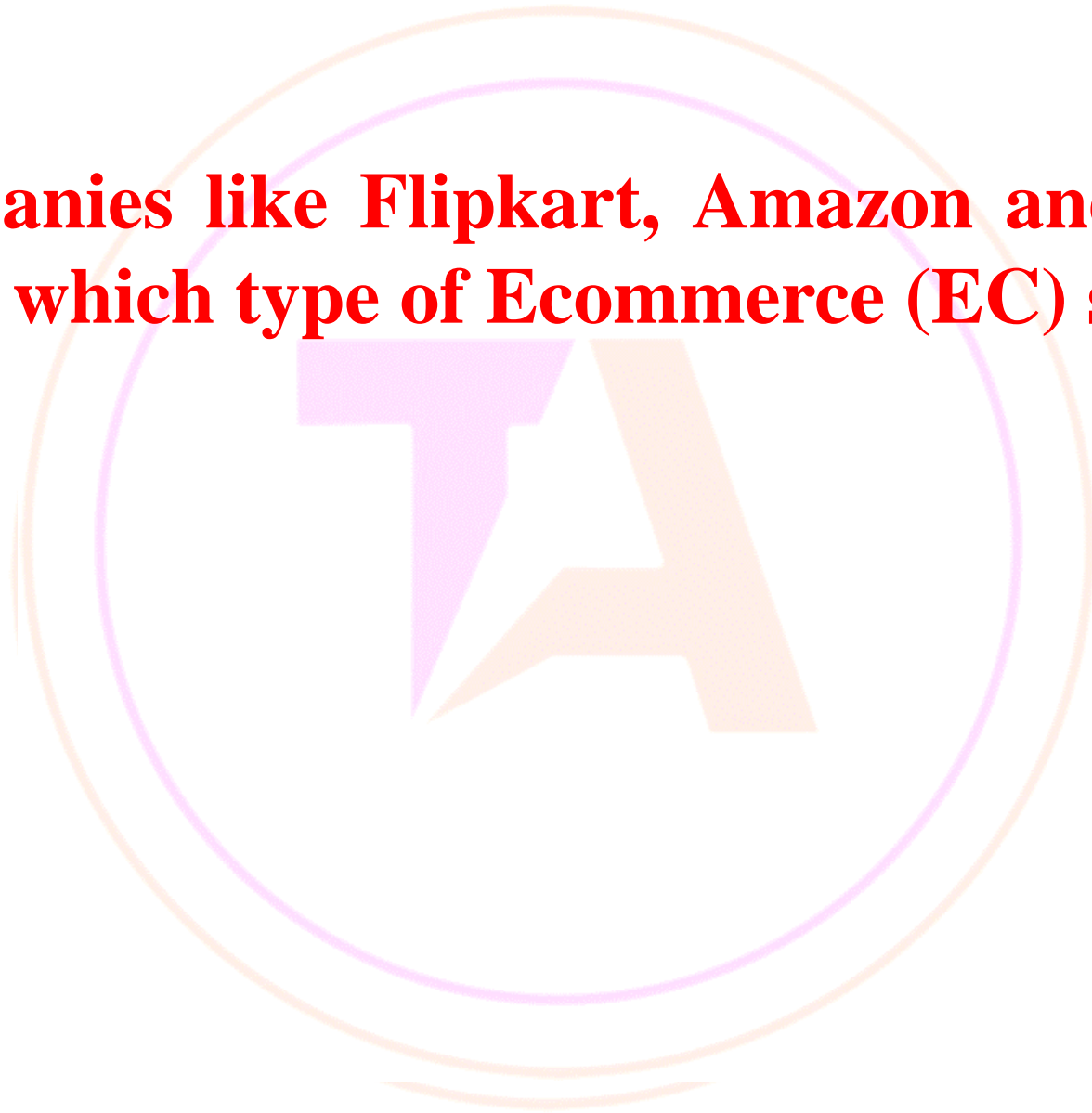
Q. _____ is a function of E commerce.

A. Marketing
B. Supply Chain
C. Finance
D. All of the above

Q. Companies like Flipkart, Amazon and Myntra belong to which type of Ecommerce (EC) segment.

A. B2B
B. B2C
C. P2P
D. C2B

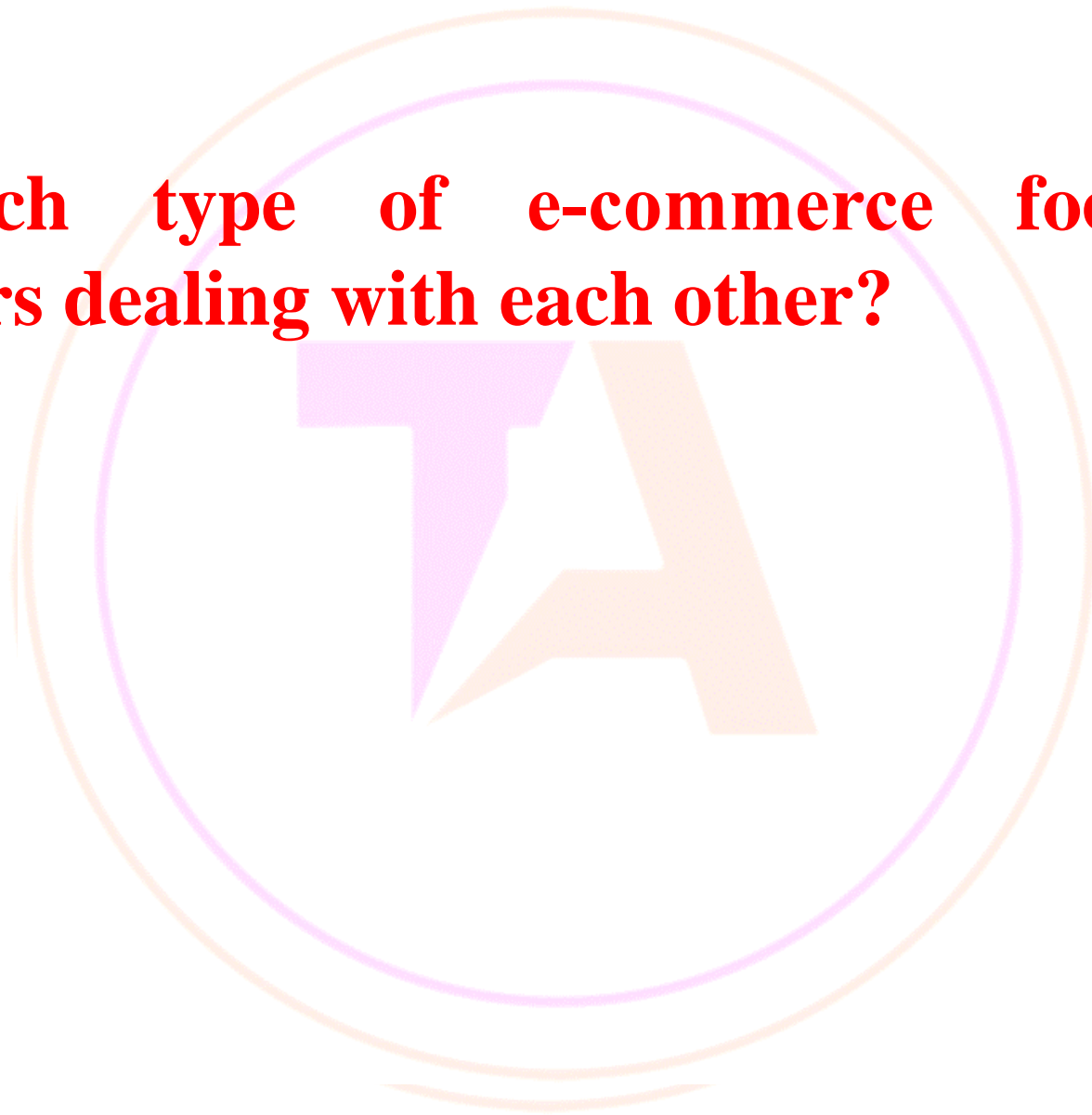**Q. This E-Commerce commercial enterprise model specifically specialises in selling services or products online.**

A. Indirect Marketing
B. Online Direct Marketing
C. Brick & Mortar
D. Marketplace

Q. Which type of e-commerce focuses on consumers dealing with each other?

a. B2B
b. B2C
c. C2B
d. C2C

Q. What is the process in which a buyer posts its interest in buying a certain quantity of items, and sellers compete for the business by submitting successively lower bids until there is only one seller left?

a. B2B marketplace
b. Intranet
c. Reverse auction
d. Internet

Q. What are plastic cards the size of a credit card that contains an embedded chip on which digital information can be stored?

a. Customer relationship management systems cards

b. E-government identity cards

c. FEDI cards

d. Smart cards

Q. If the threat of substitute products or services is low it is a(n):

a. Disadvantage to the supplier
b. Advantage to the buyer
c. Advantage to the supplier
d. None of the above

Q. The threat of new entrants is high when it is:

a. Hard for customers to enter the market
b. Hard for competitors to enter the market
c. Easy for competitors to enter the market
d. Easy for customers to enter the market

Q. If it is easy for competitors to enter the market, the threat of new entrants is considered:

a. High
b. Low
c. More
d. Less

Q. An industry is less attractive for suppliers when the rivalry among existing competitors is:

a. High
b. Low
c. More
d. Less

Q. Which of the following statements accurately reflect the impact of technology?

a. Technology has caused buyer power to increase

b. Technology has lessened the entry barriers for many industries

c. Technology has increased the threat of substitute products and services

d. all of the above

Q. A business cannot be all things to all people. Instead, a business must:

a. Identify target customers
b. Identify the value of products/services as perceived by customers
c. all of the above
d. None of the above

Q. Which of the following refers to creating products tailored to individual customers?

a. customization
b. aggregation
c. Direct materials
d. Reverse auction

Q. What is the name given to an interactive business providing a centralized market where many buyers and suppliers can come together for e-commerce or commerce-related activities?

a. Direct marketplace
b. B2B
c. B2C
d. Electronic marketplace

Q. Which form of e-marketplace brings together buyers and sellers from the same industry?

a. horizontal
b. Vertical
c. Integrated
d. inclined

Q. A combination of software and information designed to provide security and information for payment is called a what?

a. digital wallet
b. pop up ad
c. shopping cart
d. encryption