**Answers to E-Business Assignments**

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**Assignment 1**

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| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| C | D | C | C | C | C | C | D | C | D |

21) Ubiquity 22) market space

23) friction-free 24) Information asymmetry

25) Twitter 26) F

27) T 28) T

29) T 30) F

31)

**(Reference to Page 27, 36 of Textbook)**

**In the early days, e-commerce developed along with an explosive growth in US commercial market. Even started with just selling simple products, people believed they have seen a revolutionary business model that may fundamentally change the course of commerce.**

**Computer scientists and technologist envisioned that the Internet community shall remain free, self-governed and regulated. After all, one the major forces that populated Internet at its early stages are freedom to share knowledge over publicly accessible technology such as HTML.**

**Economists also held optimistic attitudes towards the new technology, in a way that they believe that the foundations of traditional competitive market model will be redefined. It can be inferred economists trusted that Internet enabled non obstructive information flow among markets. Customers would have infinite access to merchant information such as pricing, cost and quality. Merchants would have millions of access to customers. And such, intermediaries will disappear. Information flow would also eliminate competition advantages major ventures held before Internet era, and there will be no “brand”. All products share the same market price plus a fair market rate.**

**Entrepreneurs, on the other hand, held an entirely different vision. As they deemed e-commerce as a revolutionary tool to reduce production cost and increase their profit far beyond any era. The First-Mover advantage would bring huge profit to those who enters the e-commerce market first.**

**In reality, Internet is getting more surveillance than ever before. From technologists’ point of view, it turns out that politics still remain powerful even in cyberspace. Though Internet is a communication technology with no limitation of good or bad deeds, social law and market regulations still take effect. Companies who moved early toward market loop holes where law and regulations didn’t catch up, did not really survived.**

**Major vendors (both non technological and technological) company remain in market leadership. The information asymmetry has increased ever since. This goes against what economist predicted - the cause behind remains partly in that information is also valuable. One vendor would not easily share information of, say a supplier even provided with the cheapest tool to share it. Thus the introduction of Internet will not solve information asymmetry. Brands, reputation is still vital to company.**

**And as of e-retailers, their prices are not always lower than traditional retailers either. Sometimes more considering delivery cost. Customer has learnt to use Internet as a tool to investigate the pricing of the product before making the purchase. The purchase option though is often offline brands.**

**For consumers and businesses, transaction cost has not fallen since Internet era. Consumers, businesses still have to sort out the trustworthy merchants/suppliers. Considering the increase of options from lowered search cost, increased options could bring increased transaction costs.**

**Lowered search cost has caused new type of intermediaries to emerge. There are companies who focus on consolidating information across the industry.**

**First mover advantages, as predicted by entrepreneurs, did not success either. Most companies are displaced by fast followers. First mover companies has no complement on market, financial and legal assets.**

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**1.policies and regulations of IOT**

**2.unity and coordination of technical standards**

**3.formation of management platform**

**4.the establishment and formation of security system**

**5.development of applications**

**6.business model**

**Assignment 2**

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| **D** | **B** | **D** | **B** | **A** | **B** | **C** | **A** | **B** | **C** |

21) privacy policy 22)threats

23)information requirements 24)SSL (Secure Socket Layer)

25) authentication 26)F

27)T 28)T

29)F 30)T

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**（Reference: Page 227 of textbook)**

**1. Common Gateway Interface (CGI)**

**CGI stands for a set of standards that allows browser programs communicate with server programs. When browser sends legal request, as defined in RFC 3875 to server, the server will execute CGI script to generate an HTML page dynamically to the user. This provides a more personalized page for web users. Common technology used in this field includes ASP.NET, JSP. Scripting language includes JSP, PHP, Perl etc.**

**2. ASP.NET**

**This is the dynamic web page technology by Microsoft. It was first launched in 2002. As it gains great usage and went open source in 2013, it is now available across all platforms. The successor, ASP.NET core, making headlines recently, is going to support ARM based platforms.**

**ASP.NET provides dynamic web page techonology with two components on server: web application format and web page format. Web application is required to be compiled and run, while web page format can be written in HTML markup with ASP markup component.**

**Using Code-behind model, ASP.NET allows developers separating ASP.NET code from plain HTML file, which leaves web designers more focused on web designing and developmers more focus on the interactive elements.**

**3. Java, Java Servlet, JSP**

**Java was once the most widely used language in the world. Harnessing the cross-platform capability of JVM, a Java program written can be run anywhere, so long as the target environment run JVM. This makes Java program especially favorable delivered through internet. Furthermore, most modern web browsers supports JVM running on themselves, thus developer can embed Java program in their website to provide more interactivity. Though recent years some browsers, such as Google Chrome, discourages use of Java program on browser due to security issue. They block the running of Java program as the default option.**

**Java plays a more significant role on server side than browser side. Java EE has a set of Java Servlet API, providing dynamic web page services like CGI and ASP. When a request from browser is received, the web container first instantiate a Java servlet. The servlet will then respond to the request and dynamically generate a page.**

**JavaServer Page (JSP) is considered as an abstraction to Java Servlet programming. The running mechanism is similar, when in runtime, a JSP page is translated into a servlet, generating web page dynamically. Unlike servlet programming, JSP allows mixing Java code inside HTML file.**

**4. PHP**

**Among all CGI scripting, PHP is the most widely used scripting language. It is not pre-owned by any tech giants - it is born open-source from the dawn era of Internet, part of the reason why it is so popular. It is also very easy to use. It can be naturally embeded in HTML pages. It can be interpereted with Zend engine, without the need of any framwork and difficult setup. It also doesn't require the knowledge of MVC programming to start using.**

**PHP also gain attractions from software frameworks, as well as on server-side scripting.**

**5. Javascript**

**Javascript was also the most popular front-end programming language used. It can be embedded in HTML file natively or independently and provides real time response to web applications. It can handle scenarios like web form verification, real time UI response etc. It also made its way into web runtime environment like node.js.**

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**Electronic Billing Presentment and Payment (EBPP)** is when a company, organization, or group sends its bills over the [internet](https://en.wikipedia.org/wiki/Internet%22%20%5Co%20%22Internet), and customers [pay the bills electronically](https://en.wikipedia.org/wiki/Electronic_bill_payment%22%20%5Co%20%22Electronic%20bill%20payment).

**Two competing EBPP business models**

* **Biller-direct**

This refers to an approach in which consumers make payments directly to one biller that issues bills that they receive at the website of the firm that issued the bill. An example would be of a [public utility](https://en.wikipedia.org/wiki/Public_utility%22%20%5Co%20%22Public%20utility) company offering this payment service to its consumers. A market has emerged for outsourced billing providers who specialize in electronic billing processes and technology for companies that need to send bills directly to their customers.

* **Consolidator**

The approach under this model is to make payment at an aggregator or consolidator site, usually from a consumer's [bank’s website](https://en.wikipedia.org/wiki/Online_banking%22%20%5Co%20%22Online%20banking). This model allows the consumer to make payments to multiple billers that are pre-registered to receive payments.  [CheckFree](https://en.wikipedia.org/wiki/Check), a product from [Fiserv](https://en.wikipedia.org/wiki/Fiserv%22%20%5Co%20%22Fiserv), is a popular example of an aggregator in the United States. An example in the UK is [OneVu](https://en.wikipedia.org/w/index.php?).

**Assignment 3**

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**Assignment 4**

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**Assignment 5**

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**Assignment 8**

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