

**UNIVERSITY OF ZAMBIA**

**GRADUATE SCHOOL OF BUSINESS (GSB)**

**ACADEMIC YEAR 2016/2017**

**E-BUSINESS STRATEGIES & MODELS EXAMINATION MBS 6061**

**Date: 26th July, 2017 Time: 3hrs**

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**INSTRUCTIONS TO CANDIDATES:**

**There are SIX questions in this paper.**

**Answer *ANY FOUR* Questions**

**All questions carry EQUAL MARKS**

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**VENUE: Confucius Institute**

**(14hrs to 17hrs)**

**1** (a) “Africa will remain under developed as long as it does not streamline and re-work its business processes,” remarked Mouse-Click Chief Executive Officer. With the foregoing compare and contrast **Business Process Re-engineering (BPR)** and **Business Process Innovation (BPI**).

**7 Marks**

(b) Below are elements or properties of a Business Process. Provide a critical analysis of how each element contributes to the efficiency of a Business Process in facilitating work in an organization.

1. Business Process Owner
2. Business Process Actors
3. Activity Time
4. Start and End Periods
5. Activity
6. Business Process Documentation

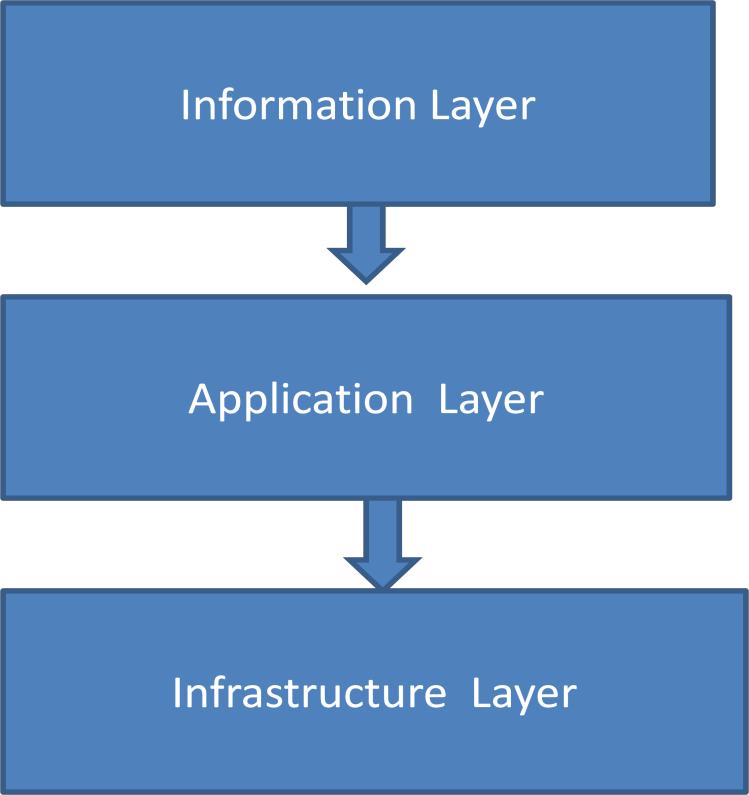
(**18 Marks)**

**SOLUTION**

**2** An e-Business architecture is a blueprint that is used to guide the delivery of applications and data related to an organisation’s e-Business activities. Critically analyse the Slyke and Belanger (2000) “**Three Layered Approach”** to e-Business architecture development, in terms of the functions of each layer. Your answer should be supported with appropriate examples.

**(25 Marks) Solution**

**A sketch of the Slyke and Belanger (2000) Three Layers[ 4 Marks ]**



**Description of each layer [ Total = 21 Marks ]**

**Information layer [ 7 Marks ]**

This layer comprises the guidelines that direct information creation, transformation, storage, distribution and access. It also includes modelling, standardisation, formats, control and ownership. Furthermore Utility and IT Accessories necessary for data modelling (Unified Modeling Language), formatting, discovery, copying, burning are located at this layer. Information security specifications which help safeguard data and information resources are located here. Business rules e.g. processes and procedures as well as policies on various business operations are all located at this layer. Access rules which define which user accesses what piece of information resource and in what format are also located at this layer.

**Application Layer** **[ 7 Marks ]**

This layer basically provides the Applications that implement the business rules defined at the Information layer and usually contain both Business (Legacy) and Web Applications. Web Applications are aimed at providing a

24/7 customer access to information to aid in decision-making processes.

Examples of Web Applications include Business Web Portals which help to carry out online transactions, Marketing Web Portals are tools for marketing and reaching out to customers. Legacy applications include Supply Chain

Management which are important in managing the whole supply chain stakeholders which include customers, suppliers, distributors, financials, partners etc. Other applications include Accounting Systems, Payroll and Human Resources Systems for internal day to day operations. Other application Systems include Electronic Storefront Software (ESS) which help to provide shopping card, wish lists, and product recommendation; Electronic

Catalogue Software(ECS) which help to provide product catalogues online, database import, product categorisation, and product searching. E-mail Client Software (ECS) allows users to manage email marketing campaigns and messages.

10

**Infrastructure layer** **[ 7 Marks ]**

This layer describes the hardware, networks and operating systems which constitute the engine on which application systems run. Hardware refers to the physical devices which include Servers ( large computers which offer services), personal computers, network devices (which help in inter-connecting computers for seamless communication) as well as Operating Systems which is important to create an enabling environment for Application Systems to operate and also to easily interface with the hardware. In a nutshell this layer consists of Client Access Devices which include personal computers, terminals, personal digital assistants, network-enabled kiosks, and mobile access devices. Network devices which include, but not limited, to switches which computers to communication on a network; Reuters which connect different networks and enable packet transmission among the connected networks, Firewalls which protect the network from outsiders; load balancers helps evenly distribute inbound traffic across the web servers in large organisations.

**3**. (a) Most African organisations are riddled with severe levels of corruption, fraud and nepotism. A corrupt practice is the offering, giving, receiving, or soliciting, directly or indirectly, any thing of value to influence improperly the actions of another party while a fraudulent practice is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation. Critically analyse five (05) **signs** of online fraud in a named organization.

(**15 Marks)**

(b) In recent years, Zambia has seen an increase in ATM Fraud. Provide three (03) technical solutions for this public nuisance.

**(10 Marks)**

**SOLUTION**

**Define Signs of fraud** are defined as the red flags or indicators of the occurrence of fraud in an organization. Types of fraud signs include behavioral signs, transactional signs, system signs and corporate signs. [ 1 mark ]

1. **The behavioural signs**: These are fraud signs that hinge on the deeds, acts and influences of workers in a particular organisation. Usually members of staff involved in fraud exhibit certain salient and subtle characteristics. These behaviours may include overspending, long absence from work or failure to take leave, increasing debts and lack of wealth, changes to work patterns and staying long hours in the office after normal business hours [3 Marks]
2. **Transactional signs** : These are fraud indicators that arise from a lack of business process transaction transparency. Examples here include unusual supplier relationship. In this regard, some members of staff especially those in the Procurement and Purchasing department may have some peculiar relationship with suppliers or vendors. These maybe sure signs of fraud because these members of staff may be receiving kickbacks in exchange for business deals. Vague description of payments for goods and services: This may also be a sign of fraud because there was seemingly a deliberate scheme to avoid describing the goods fully so as to manipulate transactions. Other signs include lack of competitive tendering processes. If an organisation persistently relies on single-sourcing goods and services, then there might be some form of fraud going on underground.

[3 Marks]

1. **System signs**: these are fraud warning signs that show up from organisational transaction systems. These system signs include using usernames and passwords of employees who are on leave. Usernames and passwords are not interchangeable because they are tied to user roles and responsibilities as well as access rights therefore if an employee uses someone’s username and password, they are likely to access information that they are not privy to. Another sign of system fraud sign is log-ins at unusual times. Staff are expected to log-into the system during operational hours unless express authority is given. However, if a member of staff is seen to be logging into the system at awkward hours, this may indicate fraud. Too many failed-in log ins. If the system audit report shows too many failed log-ins, this may indicate something wrong going on.

[3 Marks]

1. **Corporate signs**: these are fraud indicators that occur at organisational level usually involving senior management staff. Examples of corporate fraud signs include autocratic management decisions around business relationships. This is where senior managers lead by instilling fear in the members of staff such that staff cannot question certain decisions. Sometimes if an organisation that was very profitable begins to show declining sales, it may be a sign of corporate fraud. An investigation may be required to establish why. Other signs of corporate fraud signs may include artificial barriers put up by directors to avoid answering questions, overriding of budgetary controls and unusual manual transactions and adjustments

[3 Marks]

**ATM Fraud Solutions**

Double Authentication ATM Systems 3 marks

Using the Chip and Pin Cards 3 marks

Using Strong PINs (Not just Numbers) 3 marks

**4.** (a) According to Duffey K.(2000), Mobile Commerce is the delivery of electronic commerce capabilities directly into the consumer’s hand, anywhere, via wireless technology. However, others have defined Mobile Commerce as the use of wireless handheld devices such as cellular phones, hand-held computers and laptops to conduct commercial transactions online. With relevant examples, provide an in-depth account of the **mobile computing infrastructure** necessary to facilitate m-commerce. (**15 Marks)**

(b) Critically analyse five (05) factors that would compel an organization to adopt **m-commerce** for their business. (**10 Marks)**

**SOLUTION**

1 (a) Define Mobile Computing Infrastructure: Mobile Computing Infrastructure refers to the composite hardware, software, network resources and services required for the existence, operation and management of an enterprise wireless IT environment. It allows an organization to deliver wireless IT solutions and services to its employees, partners and/or customers and is usually internal to an organization and deployed within owned facilities. **(1 Mark)**

Mobile Computing Infrastructure is composed of Hardware, Networks and Software.

1. **Mobile Hardware** :-

* Mobile phones - these are mobile access devices used by customers and users to access mobile resources and services
  + Attachable keyboard – these are portable keyboards that add flexibility and mobility capabilities thus facilitating work
  + PDAs - a palmtop computer that functions as a personal organizer but also provides email and Internet access. These are mostly used in hospitals by nurses and doctors. Hotel and Restaurant staff also use them extensively. Field workers like Engineers also use them
  + Web server with a WAP gateway – This is a server that is assisted by the Wireless Application Protocol (WAP) to pass web pages to mobile devices. A *WAP gateway* sits between mobile devices using the WAP protocol and the World Wide *Web*, passing pages from one to the other much like a proxy.
  + Database server - This comprises one of the back-end servers which stores customer information and other required services. The information that customers access wirelessly is stored here
  + AGPS locator - Assisted GPS is a system that is often able to significantly improve the startup performance of a [GPS](http://en.wikipedia.org/wiki/Global_positioning_system) satellite-based positioning system. A-GPS is extensively used with GPS-capable [cellular phones](http://en.wikipedia.org/wiki/Cellular_phones) for location services

( **5 Marks** )

1. **Mobile networks** 
   * **Module (SIM) card** : A Subscriber Identity Module (SIM) Card is a portable memory chip used in most mobile devices that operate on the Global System for Mobile Communications ([GSM](http://www.wisegeek.com/what-is-gsm.htm)) network. These cards hold the personal information of the account holder, including his phone number, address book, text messages, and other data. When a user wants to change phones, he can usually easily remove the card from one handset and insert it into another.
   * **Wireless LANs** : This is a wireless computer network that links two or more devices using a wireless distribution method within a limited area such as a restaurant, hotel, computer laboratory or office building.

**(5 Marks)**

**Mobile Software**

1. **Microbrowser** – A microbrowser is an Internet browser that is designed to be specifically used for browsing the Internet on mobile phones or similar handheld devices. It has the basic capabilities of a standard computer Web browser but lacks some advanced features such as handling dynamic Web pages. Examples include Android browser, Blackberry browser, Firefox for Mobile, Opera mobile, HandWeb, Smartcode, PocketWeb etc
2. **Mobile client operating system** - This is an operating system on the mobile device (PDA, smartphone, tablet etc) that helps users to access the web via wireless internet. Examples include Apple iOS, Google Android, BlackBerry OS, Nokia’s Symbian, Hewlett-Packard’s webOS and Microsoft’s Windows Phone OS.
3. **Bluetooth** – is a [wireless](http://en.wikipedia.org/wiki/Wireless) technology standard for exchanging data over short distances from fixed and mobile devices and building P[ersonal Area Networks](http://en.wikipedia.org/wiki/Personal_area_network) (PANs). It can transmit both voice and data. It can connect several devices thus overcoming problems of synchronization.

**(5 Marks)**

**M-commerce adoption factors**

**Widespread availability**

Most customers have a mobile device and therefore it becomes easy for businesses to target these customers with what they have. It is pointless to send marketing materials through internet-connected computers which people don’t own [ 3 Marks ]

**Personalization**

Organisations are able to send personalized content to each customer through his mobile device. Each mobile device is usually dedicated to a specific user, it is personal. You can do whatever you want to your mobile device, modify the wallpaper, change view settings or modify contact information as you send emails or e- payments. [3 Marks]

**Mobility and Convenience**

The mobility aspect helps organisations and businesses to seamlessly interact with their customers anywhere, anytime. The customer can also easily carry out business transactions without any impediments payments, shopping, banking and downloading media files.

[3 Marks]

**Competitive Advantage**

Mobile technology offers more competitive advantage to businesses because of the flexibility that customers enjoy. Customers have access to information all the time

**Easy to use :** There is no need of skilled consumers. Buyers can easily use their mobile device without requiring to be trained therefore businesses have the advantage of interacting with their customers without difficulties. It is pointless to send information which customers fail to access.

1. (a) The digital economy is one comprised of markets based on digital technologies that facilitate the trade of goods and services through e-commerce. The expansion of the digital sector has been a key driver of economic development in recent years, and the shift towards a digital world has had effects on society that extend far beyond the digital technology context alone. Give a critical overview of tq21ahe c4dfimpact of the digital economy on
2. Business Organisations
3. Governments **(15 Marks)**
4. Society

(b)Competition in digital markets has certain distinctive characteristics, including tendencies toward “winner takes all” competition for the market, network effects, two-sided markets, fast-paced innovation and high rates of investment. With relevant examples, provide an in-depth discussion of the **“Winner takes all”** concept in a digital ecosystem.

(**10 Marks)**

**SOLUTION**

1. A positive business impact can be defined as a business outcome that makes a business effective and more competitive in the market place. This positive impact may be as a result of a new innovation, price reduction or changes in the operating environment among other factors.

**Business Organisations:** The digital economy has brought a lot of transformation to organisations in that some of them have had to adopt business process re-engineering strategies in order to be competitive. This is where business processes are revisited, revised and reformed to conform to the new business environment. This has made these companies to serve their customers better. The other positive impact of the digital economy on organisations has been the opening up of new markets. Today organisations are trading globally with global customers. The opening up of new global markets has resulted in faster return on investments for most organisations. The other positive impact has been the improvements in transaction speed.

Today transactions are occurring at a tremendously faster rate than before owing to the advent of the digital economy. Organisations are also getting advantages of access to skilled global manpower. Global skilled manpower is able to provide high class services to several organisations while they stay in one locality. [5 Marks]

**Society:** The impact of the digital economy on society has been very phenomena. Today members of the community are able to carry out transactions from the comfort of their homes using their mobile devices and/or computers. Travelling has now become luxury. This has been very economical in that members of the society are saving the little money they should have used in travels for other pressing needs. Secondly, most goods and services have also become much more affordable as a result of the digital economy. This affordability has come as a result of stiff competition resulting in lowering of prices. Another very positive impact on society is the seamless access to information. Society has access to credible information necessary for appropriate decision-making processes. Communication is also much more affordable, direct and quick. The era of writing and posting business letters and other documents is slowly closing down. People rely on digital communication channels like emails, scanning and attachment of documents as well as social media communication.

[5 Marks]

**Government:** Governments have also tremendously benefited from the digital economy in that their services are now easily available to citizens through digital channels. In addition, governments are also able to directly interact with its citizens through available social media channels. As a result of the digital economy, some government have gone ahead to open up open learning institutions where students learn from their homes thus helping to educate masses of their nationals. Other benefits which governments are enjoying today include the various applications of ICTs and internet technologies like e-animal conservation, e-tourism, e-agriculture etc [5 Marks]

**Winner Takes All Concept**

This is a monopolistic aspect where, as a result of technological innovations, one Company beats all the Competition by developing a very superior Product or Service such that they scoop the entire Market. The best example is Microsoft whose **Microsoft Products** have flooded the world market without much competition. They have indeed won and have taken all business.

**6** (a) E-marketing is the use of modern digital technologies to sell goods and services. Critically analyze **five (05)** techniques or technologies that can be employed in an E-marketing strategy.

**(15 Marks)**

(b)Provide a detailed account of why an organization should adopt social media for marketing its goods and services.

**(10 Marks)**

**SOLUTION**

1. Generally Several technologies and techniques are involved in E-marketing among which are:-

**Search Engine visibility:** this is a technique where a company may display their products and services on a search engine such that as users launch that search engine, they will see and appreciate the products. This is very effective because millions of users rely on search engines to surf the internet and locate vital informational resources e.g. Google Search Engine. [3 Marks]

**Visually appealing Web content**: this is where a company develops an eye catching website with very appealing features. This site will become a favourite for several users owing to its unique features and in so doing, the company’s products are easily sold. One other aspect is the ability to segment customers by targeting certain customers with specialised marketing content. This also makes customers feel recognised and may result in customer loyalty. Companies also spreading their website content by **providing links to other web sites** globally such that as customers of Company **A** visit the website of the company, they will also be able to click on the available links which ultimately leads them to the website of Company **B** thus Company **B** is indirectly marketing through Company **A’s** website. [3 Marks]

**Electronic Boards** have also sprung up in recent years such that companies are displaying and advertising their products and services on these eye catching boards. Normally these boards are displayed in busy places like markets, supermarkets, highways and byways etc. [3 Marks]

**Email marketing** is yet another special technology that companies are using effectively. Here the company sends bulky emails to hundreds and thousands of customers thus effectively marketing their products. The content is well packaged to target an individual customer. [3 Marks]

**Social Media Marketing**: Social media has also emerged as a very unique platform for marketing organisational products and services. The drifting of companies to social media is based on the principle of, “following where the people are”. Most people, masses and customers are on social media. Therefore, it becomes necessary for organisations to adopt social media as part of their e-marketing strategy. Types of social media include social networking, business networking, video sharing, photo sharing etc. [3 Marks ]

1. **Why adopt Social Media for Marketing**

**Increased Brand Recognition.** Every opportunity a company has to [syndicate its content](http://www.entrepreneur.com/article/233713) and increase its visibility is valuable. Social media networks are new channels for a company’s brand’s voice and content. This is important because it makes a company more accessible for new customers, and makes a company’s products and services more familiar and recognizable for existing customers. For example, a frequent Twitter user could hear about your company for the first time only after stumbling upon it in a newsfeed. Or, an otherwise apathetic customer might become better acquainted with your brand after seeing your presence on multiple networks.

[2 Marks]

**Decreased marketing costs**: Secondly social media tools like Facebook, twitter, YouTube etc are free such that the organisation will not need to spend any money to use them. This helps the organisation to heavily reduce its marketing budget and yet maximise marketing efficiency. MTN Zambia Limited is one of the telecommunication companies that heavily relies on social media for marketing. The company has considerably grown its customer base in the recent years.

[2 Marks]

**More Opportunities to Convert**. Every post a company makes on a social media platform is an opportunity for customers to convert. When a company builds a following, it will simultaneously have access to new customers, recent customers, and old customers, and it will be able to interact with all of them. Every blog post, image, video, or comment a company shares is a chance for someone to react, and every reaction could lead to a site visit, and eventually a conversion. Not every interaction with a company’s brand results in a conversion, but every positive interaction increases the likelihood of an eventual conversion.

[2 Marks]

**Improved Customer Insights**. Social media also gives a company an opportunity to gain valuable information about what their customers are interested in and how they behave, via [social listening](http://www.huffingtonpost.com/jayson-demers/how-to-use-social-media-l_b_3781277.html). For example, a company can monitor user comments to see what people think of its business directly. A company can segment content syndication lists based on topic and see which types of content generate the most interest—and then produce more of that type of content. A company can also [measure conversions](http://www.audiencebloom.com/2013/10/5-best-tools-measuring-social-media-performance/) based on different promotions posted on various social media channels and eventually find a perfect combination to generate revenue.

[2 Marks]

**Richer Customer Experiences**. Social media, at its core, is a communication channel like email or phone calls. Every customer interaction a company has on social media is an opportunity to publicly demonstrate its customer service level and enrich the relationship with customers. For example, if a customer complains about your product on Twitter, you can immediately address the comment, apologize publicly, and take action to make it right. Or, if a customer compliments you, you can thank them and recommend additional products. It’s a personal experience that lets customers know your company cares about them. Social media is appealing as a marketing platform because of its interactive nature. Customers are able to interact in real time with the organisation thus ably starting and concluding business transactions in record time. Transactions are thus speeded up as an end product. The inclusion of social media on mobile devices has increased this interaction between companies and their customers.

An organisation would adopt social media as part of their e-marketing strategy because it is very effective in reaching out to customers. Arising from the fact that most people are on social media, marketing through social media becomes very effective because it reaches the targeted people. [2 Marks]

**END OF EXAMINATIONS**