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Eastern University, Sri Lanka
Faculty of Commerce and Management
Second Year - Second Semester Examination in BBA/BCom - 2016/2017
January-2019 (Proper/Repeat)
MGT 2063 Management Information System

Time: 03 Hours

Answer All Five (5) Questions.

Answers have to be given in this question paper.

Number of Pages: 13

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Question	Allocated Marks	Actual Marks (1st Examiner)	Actual Marks (2nd Examiner)
Q1	20		
Q2	20		
Q3	20		
Q4	20		
Q5	20		
Total	100		

Q1. Read the following Case Study and answer the questions given below.
Toyota Motor Europe

Toyota Motor Europe (TME) manages the sales, marketing, engineering, and network for Toyota and Lexus vehicles in Europe. TME is based in Brussels. Founded in 1963, TME sales peaked at 1.3 units in 2007, and ran about 900,000 units. TME employs about 95,000 people. TME coordinates 3,100 sales outlets or dealers and nine manufacturing plants.

With millions of consumers in Europe who have purchased Toyota cars in the last decade, providing a consistent repair and maintenance service to customers was always a challenge. Repair and maintenance manuals had been replaced by personal computers in the late 1990s and early 2000s. These early computerization efforts simply automated the traditional printed manuals but had the advantage that they could be updated by distributing disks to the sales outlets. One problem: some outlets did not update their PCs in a timely fashion, and there was a need for TME management to manage the upgrade process.

TME changed its approach to maintenance as onboard computers and sensors were introduced into Toyota vehicles. These onboard computers could gather and store data from vehicle sensors. The vehicle data could be analyzed by PCs at dealerships. TME provided dealerships with over 3,500 new PCs running up-to-date software that could immediately analyze a customer's car engine performance, and provide critical maintenance and repair information and recommendations to local mechanics.

While this change in approach was a vast improvement, management did not have a clear idea for how to manage these 3,500 computers, or to know if local outlets were using the latest versions of the software. In fact these PCs remained outside the TME firewall, and were essentially stand-alone computers as in the past. Thus, it was impossible for headquarters to know if dealers were providing the same quality of service to customers, or to know if the PCs were free of viruses and operating appropriately. One partial solution was to send IT staff to the dealerships to install software updates, check for viruses, and advise on new techniques. But this was wasteful and time-consuming.

Management decided to use a cloud-based solution from Microsoft called Windows Intune. Intune allows central IT staff to run PC management tasks remotely. New software is installed, virus protection programs run, and the status updated. Each local PC needs an Internet connection, and standard browser. The local PC downloads a client version of the program. The client sends information on the PC to central IT staff.

Compared to building their own system to manage its PCs, TME found the Intune process was more efficient. TME sent each dealership an installation package, and the corporate TMW Web site. Dealerships would establish a link to the Web site to download the dealership software. The Windows Intune interface is easy to use and requires only a few hours of training.

Rather than spend on building their own IT infrastructure and software to manage the dealers' PCs, the Intune cloud-based model provides a far less expensive pay-as-you-go (demand computing) model, and there are no additional hardware or software maintenance costs. TME believes it saved over €1 million in infrastructure and

costs over a three-year period. The transition to tablet PCs in 2015 is expected to be problem-free because of their investment in a coordinated, cloud-based solution. Other management objectives were also achieved such as better security, customer service, and reduced operating costs.

(a) **Case Study. True or False Questions:**

1. The experience of Toyota Motor Europe illustrates the importance of cloud computing in running a business today.
(A) True
(B) False

2. According to the case study, the right technology at the right price can improve organizational performance.
(A) True
(B) False

3. Toyota Europe was able to use contemporary cloud technology infrastructure to improve the quality of its service, enhance security, and reduce operations.
(A) True
(B) False

4. According to the case study, TME also changed its entire philosophy of how to maintain vehicles using embedded computers in vehicles. In addition, it needed to change how it supported its 3,100 dealers.
(A) True
(B) False

5. According to this case study, rather than sending expensive staff members to each dealer, they were able to rely instead on the cloud-based solution to provide support.
(A) True
(B) False

(10 Marks)

(b) **Case Study Questions: Give brief answers to the following questions:**

1. *Identify* three (3) main business challenges faced by the Toyota Motor Europe.

(03 Marks)

Answer:

1.
2.
3.

2. *List out* two (2) main *information systems* used by management in this case study.

(02 Marks)

Answer:

1.
2.

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3. What types of the *strategic business objectives of information systems* have been achieved mainly in this case study? (02 Marks)

Answer:

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4. How does *technology* help Toyota Motor Europe solve its own business problems? Briefly explain. (03 Marks)

Answer:

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(Total 20 Marks)

Q2.

(a) Fill in the blank questions: By using most appropriate concept(s) or word(s).

1. Information technology (IT) consists of all the hardware and software that a firm needs to use in order to achieve its
2. The to information systems emphasizes mathematically based models to study information systems, as well as the physical technology and formal capabilities of these systems.
3. Firms use..... integrate business processes in manufacturing and production, finance and accounting, sales and marketing, and human resources into a single software system.
4. An information system can be defined technically as a set of interrelated components that collect (or retrieve), process, store, and distribute information to support in an organization.
5. refers to the use of digital technology and the Internet to execute the major business processes in the enterprise. It includes activities for the internal management of the firm and for coordination with suppliers and other business partners.

(05 Marks)

(b) *True or False Questions:*

1. An **international information systems architecture** consists of the sophisticated information systems required by organizations to coordinate worldwide trade and other activities.
(A) True
(B) False
2. Building a successful e-commerce presence requires a keen understanding of business, technology, and social issues, as well as a socio-technical approach.
(A) True
(B) False
3. The information systems department is responsible for maintaining the hardware, software, data storage, and networks that comprise the firm's IT infrastructure.
(A) True
(B) False
4. **End users** are representatives of departments inside of the information systems group for whom applications are developed. These users are playing an increasingly large role in the design and development of information systems.
(A) True
(B) False
5. The **Value Chain Model** highlights specific activities in the business where competitive strategies can best be applied (Porter, 1985) and where information systems are most likely to have a strategic impact.
(A) True
(B) False

(05 Marks)

- (c) To deliver genuine benefits, information systems must be built with a clear understanding of the organization in which they will be used. *What* are the central organizational factors to be considered when planning a **new system**?

(05 Marks)

Answer:

1.
2.
3.
4.
5.

- (d) An e-commerce presence requires firms to consider the four different types of presence, with specific platforms and activities associated with each. *List out and briefly explain* the four (4) different types of presence.

(05 Marks)

Answer

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(Total 20 Marks)

Q3. The following table provides ten (10) concepts and their names.

Name	Concepts or Themes
A	Information Technology
B	Cloud computing
C	Business Processes
D	Complementary Assets
E	Strategic Business Objectives of Information Systems
F	Collaboration and Social Business
G	Information Systems
H	A Digital Dashboard
I	A Digital Firm
J	Decision Support System

Answer the following questions by using these concepts directly or by applying the knowledge and information related with these concepts.

- (a) Which dimension of a Digital Firm is highly related or matched with one of the strategic business objectives of Information Systems?

(02 Marks)

Answer:

A Digital Firm ("I")	One of the strategic business objectives of Information Systems ("E")
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(b) How "A" improves "C"? Briefly explain in the given spaces.

(03 Marks)

Answer:

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(c) A delivers graphical overview of key performance indicators, comprehensive and accurate information for decision making often using a particular display, which helps managers' quickly spot areas that need attention.

(02 Marks)

(d) Which dimensions of a Digital Firm are highly related or matched with **Collaboration and Social Business**?

(02 Marks)

Answer:

1.
2.

(e) List out three (3) different types of services of "B".

(03 Marks)

Answer:

1.
2.
3.

(f) Indicate any five (5) dimensions of "C".

(05 Marks)

Answer:

1.
2.
3.
4.
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6.

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(g) Indicate three (3) types of **Complementary Assets** required to optimize returns from Information Technology investments.

(03 Marks)

Answer:

- 1.
- 2.
- 3.

(Total 20 Marks)

Q4.

(a) Develop a **Competitive Forces Model for IT Infrastructure** and briefly explain about it.

(06 Marks)

Answer:

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(d) *Briefly explain* about at least five (5) ethical issues which are related with information systems or technology usage in an organization.

(05 Marks)

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(Total 20 Marks)

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Q5.

(a) Fill in the blank questions: By using most appropriate concept(s) or word(s).

1. a new networking approach in which many of these control functions are managed by one central program, which can run on inexpensive commodity servers that are separate from the network devices themselves.
2. A has more intelligence than a hub and can filter and forward data to a specified destination on the network.
3. are very simple devices that connect network components, sending a packet of data to all other connected devices.
4. A is a communications processor used to route packets of data through different networks, ensuring that the data sent gets to the correct address.
5. A new data analysis technology called has given both the government and the private sector even more powerful profiling capabilities.

(05 Marks)

(b) True or False Questions:

1. A **database** is a collection of data organized to serve many applications efficiently by centralizing the data and controlling redundant data. Rather than storing data in separate files for each application, data appears to users as being stored in only one location.
(A) True
(B) False
2. **Internet Protocol (IP) address**, which currently is a 32-bit number represented by four strings of numbers ranging from 1 to 256 separated by periods.
(A) True
(B) False
3. The range of frequencies that can be accommodated on a particular telecommunications channel is called its **bandwidth**.
(A) True
(B) False
4. Today's corporate network infrastructure is a single network from the public switched telephone network, to the Internet, to corporate local area networks linking workgroups, departments, or office floors.
(A) True
(B) False
5. The use of computers to combine data from multiple sources and create electronic dossiers of detailed information on individuals is called **profiling**.
(A) True
(B) False

(05 Marks)

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- (c) A contemporary infrastructure for business intelligence has an array of tools for useful information from all the different types of data used by businesses today, semi-structured and unstructured big data in vast quantities. *Identify* the business intelligence infrastructure capabilities of an organization and *briefly explain* about them.

Answer:

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- (d) An organization wants to improve its security and control of information system context, you are required to *identify* the key components of that organization's framework for security and control?

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(Total 20 Marks)