



TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF BUSINESS

DEPARTMENT OF MANAGEMENT SCIENCE

UNIVERSITY EXAMINATION FOR:

MASTERS IN BUSINESS ADMINISTRATION EIT 5101: MANAGEMENT INFORMATION SYSTEM

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: SEPTEMBER 2018

TIME: 3HOURS

DATE: Sep 2018

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attempt Choose instruction. Question One and any other Three Questions

Do not write on the question paper.

QUESTION 1

Read the following case and answer the questions that follow.

ESPN (Entertainment and Sports Programming Network) is a multimedia, global cable television network with headquarters in Bristol, Connecticut. Founded in 1979 with financing provided by The Getty Oil Company, ESPN grew along with the cable television industry to become a mainstay of American popular culture. After a series of investments by Hearst Publications, and ABC (the American Broadcasting Network), 80% of ESPN finally ended up in the hands of entertainment giant The Walt Disney Company, and 20% with the Hearst Corporation, a 100 year-old media company based largely on newspaper and magazine businesses. ESPN focuses on sports programming including live and pre-taped event telecasts, sports talk shows, and other original programming. While originally a cable media company, ESPN has since expanded aggressively to the Internet as well as radio and print magazines. In 2012 ESPN cable outlets have approximately 100 million subscribers in the United States, and over 140 million subscribers world wide.

ESPN is actually a family of sports networks and individual shows. There are eight 24-hour domestic television sports networks: ESPN, ESPN2, ESPNEWS, ESPN Classic, ESPN Deportes (a Spanish language

network), ESPNU (a network devoted to college sports), ESPN 3D (a 3D service), and the regionally focused Longhorn Network (a network dedicated to The University of Texas athletics). ESPN also operates five high-definition television simulcast services, ESPN HD, ESPN2 HD, ESPNEWS HD, ESPNU HD, and ESPN Deportes HD. ESPN programs the sports schedule on the ABC Television Network, which is branded ESPN on ABC. ESPN owns, has equity interests in or has distribution agreements with 47 international sports networks reaching households in more than 200 countries and territories in 16 languages including a live sports network in the UK. ESPN holds a 50% equity interest in ESPN Star Sports, which distributes sports programming throughout most of Asia, and

a 30% equity interest in CTV Specialty Television, Inc., which owns The Sports Network, The Sports Network 2, Le Réseau des Sports, ESPN Classic Canada, the NHL Network and Discovery Canada.

In addition to its media outlets, ESPN is well-known for its ownership of the rights to various professional and college sports programming, including, NFL, NBA, the SEC, ACC and Pac 12 college football and basketball conferences, NASCAR and MLB (Major League Baseball).

On the Internet, ESPN owns ESPN.com which delivers comprehensive sports programming, news, information and video each month through its national hub and five local sites—ESPNBoston.com, ESPNChicago.com, ESPNDallas.com, ESPNLosAngeles.com and ESPNNewYork.com. ESPN3.com is a broadband service available to 70 million subscribers that delivers more than 4,000 live events.

In 2011 U.S. sports fans spent 4.7 billion total minutes on ESPN.com in September, a sports category record, according to data released by comScore. The total minutes generated by ESPN translate to an average minute audience of 107,878 for the month, also a record in the sports category. In terms of reach, ESPN led all sports sites with 52.2 million unique visitors in September. In most demographic categories, ESPN.com is the fifth most popular site on the Internet (following Facebook, Google, Yahoo, and Microsoft).

With 52 million unique online visitors, ESPN receives an avalanche of requests for information services every second of every day. ESPN needs to keep track of each visitor's personal interests and profile in order to provide those services. To cope with this highly interactive environment, ESPN adopted an IBM technology called WebSphere® eXtreme Scale. eXtreme Scale is a set of software and hardware tools that rely on distributed cache memory as opposed to hard disk drives to access data. Combining the processing power of 20 or more server computers into a single environment called a "grid," makes it possible for ESPN to process very large volumes of transactions (requests for service) in single millisecond time frames. In addition, the system is highly flexible and can be scaled up or down depending on the demand for services.

Required

- a) How many requests from users does ESPN receive each second? Do you think this is a consistent pattern or does it have peaks and valleys? When does it peak?

(5 marks)

b) Why does ESPN store personal information and preferences on its databases and how does this personal information complicate the ability of ESPN to respond to requests from users? Why can't ESPN just use Web page caching to handle the loads?

(5 marks)

c) How much information on users does ESPN store? Why does this pose a challenge for ESPN? Can't they just use a standard 1 terabyte hard drive from a PC? Why can't they use a single PC?

(5 marks)

d) What platforms do ESPN customers use when access their Web sites, and how does this further complicate ESPN's processing picture?

(5 marks)

e) What are the key components in ESPN's solution? Describe the function of each.

(5 marks)

f) Why is scalability so important to ESPN?

(5 marks)

QUESTION 2

a) Discuss why a typical hierarchical management structure is not conducive to a collaborative business culture.

(9 marks)

b) Discuss the tools and technologies for collaboration and social business that are available and how they provide value to an organization.

(8 marks)

c) Discuss the impact new information systems may have on organizational culture and organizational politics.

(8 marks)

QUESTION 3

a) What is Java and how is it changing the computing environment?

(9 marks)

b) Discuss the business value of open-source software. **(8 marks)**

c) Describe the three capabilities of database management systems: data definition, data dictionary, and data manipulation language. Discuss the importance of creating and using a data dictionary with a large corporate database. **(8 marks)**

QUESTION 4

a) How does enterprise software enable a business to use industry-proven best practices? **(9 marks)**

b) Explain the bull-whip effect on a supply chain and how it can be avoided. **(8 marks)**

c) Describe the difference between push-based supply models and pull-based supply models. **(8 marks)**

QUESTION 5

a) Discuss the security issues associated with cloud computing and what cloud users should do about them. **(9 marks)**

b) Discuss the threat employees pose to information system security. **(8 marks)**

c) How is an expert system different from a neural network? **(8 marks)**

QUESTION 6

a) Discuss how the features of ubiquity, universal standards and information richness make e-commerce different from traditional retailing efforts. **(9 marks)**

b) Describe how the Internet changes information asymmetry in favor of consumers versus sellers. **(8 marks)**

c) Discuss how businesses can use the “wisdom of crowds” to improve their products or services. **(8 marks)**