UNIVERSITY OF GHANA

B.SC INFORMATION TECHNOLOGY, FIRST SEMESTER UNIVERSITY EXAMINAT

IONS: 2017/2018

CSIT415 - APPLICATION OF DIGITAL TECHNOLOGIES (3 CREDITS)

INSTRUCTION:

*Answer Any **Three** (3) Questions*

TIME ALLOWED:

TWO AND A HALF (2½) HOURS

Q1A) Giving two (2) examples each, describe four (4) types of storage devices that are used in digital devices today.

[8 Marks]

Q1A) Discuss the following main features of storage devices?

a. Volatility

b. Accessibility

c. Mutability

d. Addressability

[3 marks each]

Q2A) Distinguish among *general-purpose, application-specific,* and *single-purpose processors*

[8 Marks]

Q2B) Explain the following terms and state the challenges of adopting them.

    a. Green Computing

    b. Cloud Computing

    c. Internet of Things (IoT)

    d. Cyber security

[3 marks each]

Q3A) Distinguish between a *digital system* and an *embedded system*. Give two (2) examples of each system.

[6 Marks]

Q3B) With a labeled diagram, describe the components of an embedded system.

[6 Marks]

Q3C) Discuss four (4) metrics that should be considered when designing an embedded system.

[8 Marks]

Q4A) What is Big Data Technology?

[4 Marks]

Q4B) Discuss the challenges of Big Data Technology in terms of the four "Vs" Model (Volume, Variety, Velocity, and Value). [12 Marks]

Q4C) What would be the implications of Big Data Technology for IT professionals?

[4 Marks]

Q5A) Information systems are transforming business and are essential for running and managing a business today. Describe how information systems have changed the way businesses operate and their products and services. [4 Marks]

Q5B) Define business processes and describe the role they play in organizations. [4 Marks]

Q5C) Discuss six (6) reasons why information systems are so important for business today.

[12 Marks]