# MACHAKOS UNIVERSITY

**University Examinations for 2022/2023**

**SCHOOL OF ENGINEERING AND TECHNOLOGY**

**DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY**

**THIRD YEAR SECOND SEMESTER EXAMINATION FOR**

**BACHELOR OF SCIENCE IN COMPUTER SCIENCE**

**SCO 311: ELECTRONIC COMMERCE**

**DATE: 12/4/2023** **TIME: 11:00 – 1:00 PM**

**INSTRUCTIONS:**

**Attempt Question One** and **Any Other Two** questions in this paper

**QUESTION ONE (30 MARKS) [COMPULSORY]**

(a) (i) Explain THREE differences between traditional commerce and e-commerce. (6 marks)

(ii) Discuss TWO non-technical disadvantages of e-commerce. (4 marks)

(b) Explain the FOUR parties usually involved in e-payments. (8 marks)

(c) (i) Define the terms Electronic Data Interchange (EDI). (2 marks)

(ii) John a consultant in an audit firm based in Machakos town, intends to apply Marketing communications via Internet, discuss THREE characteristics that he should consider. (6 marks)

(d) Outline any TWO tangible benefits of EDI. (4 marks)

**QUESTION TWO (20 MARKS)**

(a) Define the term digital economy. (2 marks)

(b) i) Explain the term electronic marketplace and outline its main components. (9 marks)

ii) Explain the THREE main functions of e-markets. (3 marks)

(c) Describe each of the following standards for e-payments:

i) Secure socket layer (SSL)

ii) Transport Layer Security (TLS)

iii) Secure Electronic Transaction (SET) (6 marks)

**QUESTION THREE (20 MARKS)**

Over the years you developed a friendship with Alice, the owner-operator of a high quality coffee shop. As a result of recent government regulations in relation to managing the recent Covid-19 pandemic, Alice has decided to close the retail aspect of her business and move it online. She turns to you for help as you are the friendly neighborhood Computer Scientist.

(a) Discuss FOUR factors Alice needs to consider that would be different from operating a retail location before moving her business. (4 marks)

(b) Moving online enables Alice to consider alternative business models. With the use of suitable diagrams, describe two e-commerce models that might be relevant to her coffee business. (6 marks)

(c) Choose one of the models you identified above and discuss what activities Alice might need to use to implement the model, along with the metrics she could use to measure if she is being successful or not. (10 marks)

**QUESTION FOUR (20 MARKS)**

(a) Describe TWO aspects of a fair market. (4 marks)

(b) Explain the settlement mechanism in a credit card transaction. (4 marks)

(c) Describe the functions of a currency and the challenges of implementing electronic currencies. (4 marks)

(d) Discuss whether Bitcoin is better described as a currency, a bearer certificate or something else and what tests you would apply in making this determination. (8 marks)

**QUESTION FIVE (20 MARKS)**

Despite the early hope that the internet would help create greater competition and fairer markets, in reality it has given rise to dominant firms in most of the major online markets and hence less competition.

(a) With the use of examples describe FIVE characteristics of online markets that make this statement true. (5 marks)

(b) Using examples describe FIVE characteristics of online markets that make this statement false. (5 marks)

(c) Discuss how you think using blockchain technology can help create fairer online markets, giving credible reasons for your argument. (10 marks)