



MACHAKOS UNIVERSITY

University Examinations for 2020/2021 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF ECONOMICS

FIRST YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF ECONOMICS AND FINANCE

BACHELOR OF ECONOMICS AND STATISTICS

BACHELOR OF ECONOMICS

BACHELOR OF ARTS

EAE 100: ECONOMICS OF INFORMATION TECHNOLOGY

DATE: 12/8/2021

TIME: 2:00 – 4:00 PM

INSTRUCTIONS: Answer Question **ONE** and any other **TWO** Questions.

- (i) Answer question one (Compulsory) and any other two questions
- (ii) Do not write on the question paper
- (iii) Show your working clearly

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Explain three main categories of Price discrimination evident in the Kenyan Economy Today (9 marks)
 - b) Discuss the various changeover methods that Machakos university can possibly employ if it wants to fully conduct its activities on an online platform. (8 marks)
 - c) Explain the two main reasons behind the rapid growth in software maintenance in the global economy (4 marks)
 - d) Which economic indicator is used to control for fluctuations in the production inputs, and how is it applied? (1 mark)
 - e) Use a production function of the form of $Y = AK^{0.5}L^{0.5}$, where A is technology, K is capital and L is labour, calculate the following;
 - i. Labour productivity (1 mark)
 - ii. Marginal product of labour (2 marks)
 - iii. Capital productivity (1 mark)
 - iv. Marginal product of capital (2 marks)
 - f) What are the two main technological productivity effects on any firm as explained in Economics of IT. (2 marks)
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QUESTION TWO (20 MARKS)

- a) Explain the term Digital Economy used in Economics of IT, giving its characteristics and circumstances when it can be used. (8 marks)
- b) Which are the advantages of a successful post implementation phase in system development? (6 marks)
- c) 'In intellectual property cases, monopolies are known to cause inefficiencies where producers tend to charge more and produce less than what would be socially desirable'. Use a well labelled diagram to proof this statement. Show the supernormal profit zone, the inefficiency zone and the dead weight zone. (6 marks)

QUESTION THREE (20 MARKS)

- a) Explain the different types of programs used to operate computers and their devices. (10 marks)
- b) In your opinion, has the use of information technology improved the productivity of workers in Kenyan firms? Discuss your answer. (10 marks)

QUESTION FOUR (20 MARKS)

- a) Define the term "electronic data processing" and use a fitting example to illustrate the process of data processing in a firm that has adopted the use of electronic data processing device. (10 marks)
- b) "Information technology has the potential to continue driving growth for the foreseeable future" Explain some of the trends that have been observed that suggest that ICT will continue to be a driver of growth. (8 marks)
- c) Distinguish between a hardware and software (2 marks)

QUESTION FIVE (20 MARKS)

- a) Define the term Economic efficiency and describe three important factors that characterize an efficient market. (4 marks)
- b) Discuss the main impediments that the BPO sector encounter in Kenya. (10 marks)
- c) Explain how the use of IT has deepened severity of business cycles through Financial Innovation and Improved Inventory Management (6 marks)