MACHAKOS UNIVERSITY

University Examinations for 2020/20201Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF ECONOMICS

FIRST YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF ECONOMICS AND STATISTICS

BACHELOR OF ECONOMICS AND FINANCE

BACHELOR OF ECONOMICS

BACHELOR OF ARTS

EAE 100: ECONOMICS OF INFORMATION TECHNOLOGY

DATE: 25/2/2021   **TIME:2.00-4.00 PM**

INSTRUCTIONS:

  (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)   Apart from first, second and third degree forms of price discrimination, there are other related forms of price discrimination that are relevant to the world of IT. Discuss each of them briefly giving an example in each.

   (8 marks)

b)   Which are the major types of ICT in a given economy?   (3 marks)

c)   Distinguish between Efficiency and Economic efficiency and describe three important factors that characterise an efficient market.

   (5 marks)

d)   i.   Define the term Business process outsourcing as used in Economics of IT

   (2 marks)

   ii.   Which attempts has the Government of Kenya taken to ensure performance improvement in the above sector.   (3 marks)

e)   Describe what you understand by *Entropy* in relation to software maintenance.

   (4 marks)

f)   Production of any form of information follows five main phases. Briefly discuss them.   (5 marks)

QUESTION TWO (20 MARKS)

a)   Which indicators show the utilization of ICT in Kenya?   (5 marks)

b)   Omae is an economic Consultant in Firm Z. He Has been given data to analyse so that the firm can adopt the necessary policies. Explain the important factors that Omae should consider in order to select the best data processing method   (9 marks)

c)   Differentiate between the following terminologies;

   i.   System software and Firmware   (2 marks)

   ii.   Programming software and programming language   (2 marks)

   iii. Assignment scope and Production rate   (2 marks)

QUESTION THREE (20 MARKS)

a)   By use of a diagram, illustrate a simple form of an operating system and 4 basic types of operating systems found in IT gadgets.   (11 marks)

b)   i.   What do you understand by the term Economic Paradigm?   (1 mark)

   ii.   Discuss the basic issues that distinguish the various types of paradigms form each other   (8 marks)

QUESTION FOUR (20 MARKS)

a)   Highlight any 4 uses of an EDP equipment and give the major classifications of these equipment   (10 marks)

b)   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)

c)   Identify one organization within your sub county and point out some of the information that the organization may need.   (4 marks)

QUESTION FIVE (20 MARKS)

a) Planning for implementations begins at the design stage of a system development cycle. Discuss the tasks that must be performed to ensure successful implementation of a new system. (12 marks)

b) '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)

c) What are the two main technological productivity effects on any firm as explained in Economics of IT. (2 marks)