



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**SCHOOL OF BUSINESS & ECONOMICS**  
**UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN**  
**ICT.**  
**4<sup>TH</sup> YEAR 1<sup>ST</sup> SEMESTER 2021/2022 ACADEMIC YEAR**  
**MAIN CAMPUS**

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**COURSE CODE: INNOVATION TECHNIQUES AND MODELS**

**COURSE TITLE: ITB 1411**

**DATE:**

**TIME:**

**TIME: 2 HOURS**

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**Instructions:**

1. Answer **ALL questions in Section A and B** and **ANY other TWO questions in Section C**
2. Tick the most correct alternative in Section A
3. Answers to Questions in Section B and C must be written in the spaces provided on the question paper.
4. Candidates must ensure they submit their work by clicking “finish and submit attempt” button at the end.



Registration No.....

### **QUESTION ONE (30 Marks)**

- a) The first Industrial Revolution began in England in the late 18th century. What do we mean by the term industrial revolution? **(2 marks)**
  
- b) In what ways did life for workers change as a result of the Industrial Revolution? **(4 marks)**
  
- c) Innovation today is said to involve the capacity to quickly adapt by adopting new innovations (products, processes, strategies, organization, etc). With examples, identify the categories and dimensions of innovations. **(5 marks)**
  
- d) The Creative Process is about thinking and doing in no prescribed order. Some people 'do' first and then think about what they have done, while others think first and then initiate action. List down the 5 stages of a creative process. **(5 marks)**
  
- e) Give three characteristics of successful innovating companies. **(3 marks)**
  
- f) Differentiate between social innovations and technological innovations. **(2 marks)**
  
- g) What are the two key elements of disruptive technologies? **(2 marks)**
  
- h) The single biggest reason why most organizations and individuals do not achieve their full potential is because of innovation barriers. Give the barriers to innovation. **(5 marks)**
  
- i) Identify the two idea focusing tools. **(2 marks)**



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## **QUESTION TWO (20 Marks)**

a) Innovation is an opportunity for something new, different. It is always based on change. Innovators do not view any change as a threat but as an opportunity. With local firms examples, examine the three major steps in innovation process. **(6 marks)**

b) According to Peter F Drucker, an innovation is a far deeper process than simply improvement and the change it brings is also far long lasting and full of impact. However, several times the question has been asked where innovation emerges from. There can be several answers to the question since there can be several sources of innovation. List and explain the seven sources of innovation according to Peter F Drucker.

**(14 marks)**

## **QUESTION THREE (20 Marks)**

a) Students Association of JOOUST are supposed to have the elections of new student leaders. You are required to determine how the students are going to make the decision for the best leaders. Using a decision matrix, examine the ways in which you can use to select the best leaders for the association. **(14 marks)**

b) Brainstorming is the act of generating ideas or ways of solving problems where all ideas are recorded for further discussion and analysis while the issue stated must be understood by all participants. The brainstorming process has six major steps. Discuss. **(6 marks)**



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#### **QUESTION FOUR (20 Marks)**

- a) Scenario thinking aka Scenario planning is a strategic planning method that some organizations use to make flexible long term plans. As an ICT graduate, you are tasked to illustrate the scenario planning cycle that an organization can use for strategic planning. **(10 marks)**
- b) Identify the advantages and disadvantages of scenario thinking. **(4 marks)**
- c) The Gordon Method is a method of idea generation used for developing new ideas when persons are unaware of the problem at hand. Analyze the advantages and disadvantages of this method in idea generation. **(6 marks)**

#### **QUESTION FIVE (20 Marks)**

- a) An Innovation model provides a detailed framework to identify, advance, and implement ideas. Thus, focuses on adopting methods to create the needed value. Roy Rothwell, a British Sociologist is a pioneer in industrial innovation. He made significant contributions to innovation management. Rothwell put forward five generations of innovations from the 1950s onwards. His findings are based on various marketing factors. This includes-inflation, stagflation, economic recovery, unemployment, etc. With Illustrations, discuss the five major generations of innovation.

**(20 marks)**