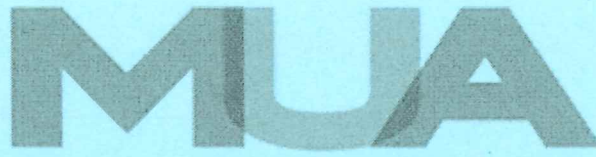


The
Management
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UNDERGRADUATE UNIVERSITY EXAMINATIONS
SCHOOL OF MANAGEMENT AND LEADERSHIP
DEGREE OF BACHELOR OF ARTS IN DEVELOPMENT STUDIES

BDS 201: TECHNOLOGY AND DEVELOPMENT

DATE: 3RD DECEMBER 2024

DURATION: 2 HOURS

MAXIMUM MARKS: 70

INSTRUCTIONS:

1. Write your registration number on the answer booklet.
2. **DO NOT** write on this question paper.
3. This paper contains **SIX (6)** questions.
4. Question **ONE** is compulsory.
5. Answer any other **THREE** questions.
6. Question **ONE** carries **25 MARKS** and the rest carry **15 MARKS** each.
7. Write all your answers in the Examination answer booklet provided.

QUESTION ONE

Read the Case Study below carefully and answer the questions that follow:

Kulandai, a developing nation, has experienced significant technological growth in the past ten years, driven by both domestic innovation and international collaborations. The government has partnered with private firms, foreign investors, and international development organizations to modernize various sectors, including agriculture, healthcare, and manufacturing. For example, Kulandai adopted a new agricultural technology that boosted food production, helping to combat food insecurity. At the same time, an influx of new manufacturing technologies has led to increased employment opportunities and economic diversification.

However, this rapid technological growth has not come without challenges. Many rural areas struggle with access to these technologies due to poor infrastructure, limited digital literacy, and inadequate policy frameworks. Ethical issues have also arisen concerning data privacy and the environmental impact of certain technologies. Kulandai's government is now focusing on addressing these challenges to ensure that technological advancements lead to inclusive and sustainable development for all its citizens.

Required:

- a) Define technology and development, and explain how the two are interconnected in the context of national development. **(5 marks)**
- b) Identify and discuss three types of technology mentioned in the case and their role in Kulandai's development. **(6 marks)**
- c) Analyze the challenges Kulandai might face in technology diffusion and propose possible solutions. **(6 marks)**
- d) Discuss the ethical concerns that may arise from the increased use of technology in Kulandai. **(4 marks)**
- e) Suggest two policies that the government could implement to enhance the positive impact of technology on national development. **(4 marks)**

QUESTION TWO

- a) Define technology transfer and explain the different mechanisms for transferring technology. **(5 marks)**
- b) Discuss the factors influencing the choice of technology transfer mechanisms in a developing country. **(5 marks)**
- c) Explain the role of technology assessment in ensuring sustainable development. Provide an example. **(5 marks)**

QUESTION THREE

- a) Define technology diffusion and explain its importance in fostering economic development. **(5 marks)**
- b) Identify and explain two major challenges to technology diffusion in developing countries. **(4 marks)**
- c) Describe two theories of technology diffusion and how they apply to rural development. **(6 marks)**

QUESTION FOUR

- a) Outline the role of the National Council of Science and Technology (NCST) in promoting scientific innovation in Kenya. **(5 marks)**
- b) Discuss the ethical considerations of science and technology in the context of Kenyan development, with reference to public health and medical services. **(5 marks)**
- c) Explain the importance of information dissemination in supporting Kenya's development goals. **(5 marks)**

QUESTION FIVE

- a) Define biotechnology and explain its application in food production.
(5 marks)
- b) Discuss two advantages and two disadvantages of using biotechnology in agriculture.
(6 marks)
- c) Critically evaluate the impact of biotechnology on rural development in Kenya.
(4 marks)

QUESTION SIX

- a) Explain the historical context of China's involvement in Kenyan infrastructure projects.
(5 marks)
- b) Analyze the mutual benefits and criticisms of the Sino-Kenya relationship.
(6 marks)
- c) Suggest how Kenya can leverage its relationship with China to promote long-term sustainable development.
(4 marks)