



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF ENGINEERING TECHNOLOGY
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN
RENEWABLE ENERGY AND BACHELOR OF SCIENCE IN CONSTRUCTION
MANAGEMENT
SEMESTER 2016/2017 ACADEMIC YEAR

CENTRE: MAIN CAMPUS

COURSE CODE: PES 3215

COURSE TITLE: SUSTAINABLE DEVELOPMENT

EXAM VENUE: STREAM: ENGINEERING

DATE: EXAM SESSION:

TIME: 2 HOURS

Instructions:

- 1. Answer question 1 (compulsory) and ANY other 2 questions.**
- 2. Candidates are advised not to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

QUESTION ONE

- a) Define the following terms as applied to sustainable development
 - (i) Sustainability (2 marks)
 - (ii) Development (1 mark)
 - (ii) Utility (1 mark)
- b) With the help of a schematic diagram, discuss the Concept of Sustainable Development (CSD) (5 marks)
- c) Discuss how Kenya has mainstreamed the concept of sustainable development into her development agenda (5 marks)
- d) Outline **Ten** conventional CSD indicator themes used for measuring Sustainable Development (5 marks)
- e) Outline any **Ten** Sustainable Development Goals (SDGs) (5 marks)
- f) Briefly explain the impact of population growth on sustainable development in Kenya (5 marks)

QUESTION TWO

- (a) With examples, discuss the theories of weak and strong sustainability (12 marks)
- (a) Briefly explain the relationship between technological change and sustainable development (8 marks)

QUESTION THREE

- (a) Discuss the conditions and guiding principles of Sustainable Development (10 marks)
- (b) Discuss the role of a planner/engineer/environmentalist in Sustainable Development (10 marks)

QUESTION FOUR

- (b) Discuss the Precautionary Principle as a minimum Standard for Sustainable development (10 marks)
- (c) Elucidate the evolution and history of Sustainable Development (10 marks)

QUESTION FIVE

- Discuss Sustainable livelihoods Approaches for rural development (20 marks)