



**NATIONAL OPEN UNIVERSITY OF NIGERIA
DEPARTMENT OF PEACE STUDIES & CONFLICT RESOLUTION
FACULTY OF SOCIAL SCIENCES**

2023_2 EXAMINATIONS_

Course Code: PCR 352

Course Title: Sustainable Environmental Development and Peace

Time Allowed: 3 Hours

Instruction: Answer any four questions.

Question 1

Discuss the human-centred development objectives that required for sustainable development processes

Question 2

A sustainable society is evidential improvement in the quality of human life, discuss the indices and strategies interlinking the principle of sustainable society?

Question 3

Outline the various reasons for environmental education

Question 4

Explain the various socio-economic opportunities that can be derived from the natural resource base? (17.5 marks)

Question 5

Elucidate the principle of participatory development (17.5 marks)

Question 6

The mismatch between the rural and urban areas must be addressed through some conquering strategies in order to build and enhance peace and sustainable development, discuss?

6a. How is right-linear grammar differ from left-linear grammar? (2 marks)

6b. What type of regular grammar is represented below and why? (2 marks)

$S \rightarrow aX \mid Xa \mid a$

$S \rightarrow \lambda$

6c. Give the resulting grammar after removing E production in the following grammar (2marks)

$S \rightarrow AB$

$A \rightarrow aAA \mid \epsilon$

$B \rightarrow bBB \mid \epsilon$

6d. What does the *pumping lemma* say? (3 marks)

6e. Convert this regular expression to context-free grammar (3 marks)

i. $L = \{a^n b^n : n \geq 0\}$ $L = \{a^n b^n : n \geq 0\}$

ii. $L = \{a^n b^k : k > n \geq 0\}$