



**NATIONAL OPEN UNIVERSITY OF NIGERIA  
FACULTY OF AGRICULTURAL SCIENCES  
DEPARTMENT OF CROP AND SOIL SCIENCES**

*EXAMINATION: SECOND SEMESTER POP EXAMINATION OCTOBER 2019\_2*

**COURSE TITLE: PERMANENT CROP PRODUCTION**

**COURSE CODE: ACP 303**

**TOTAL SCORE: 70 MARKS**

**TIME ALLOWED: 2hours**

**INSTRUCTION: Answer FOUR Questions in all.**

*Question 1 is compulsory (25marks) and any three questions (15 marks each)*

**Question One**

- a) Identify the under listed crops with their botanical names. (10 marks)  
(i)Cacao ( ii)Coffee (iii)Kola (iv)Rubber (v) Oil Palm
- (b) State the general economic importance of the listed tree crops (5marks)
- (c) List any five Specific products from Cocoa\_(5marks)
- (d) Briefly describe the method of primary processing of *cola nitida* or *cola acuminata* (5marks)

**Question Two**

- a) List the procedure in selecting a site for establishment of a permanent/plantation crop field. (7 ½ marks)
- b) Write a short note on Soil factors that affect permanent crops establishment (7 ½ marks)

**Question Three**

Write a short explanatory note on each of the following

- a) Weeding (b) Shading (c) Mulching( 5 marks each x 3=15)

**Question Four**

- a) Identify any 2 diseases of cacao, and outline their causal agents and mode of transmission. (7marks)
- b) List any four insect Pests of permanent crops (4 marks)
- c) Provide the spacing recommended for (i) cacao (ii)coffee (iii) rubber (v) oil palm (4marks)

**Question Five**

- a) Enumerate any five simple tools used in the production of permanent crops.(5marks)
- b) Define weeding with reference to permanent crops. (5marks)
- c) Give reasons why processing is required in oil palm and (5marks)

**Question Six**

- a) Outline any three methods of fertiliser application on permanent tree field (6marks)
- b) List 3 methods of nutrient deficiency detection in field crops(3marks)
- c) List three types of pesticides. (3marks)
- d) List three pesticides used on plantation crops (3marks)