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OBAFEMI AWOLOWO UNIVERSITY, ILE-IFE, NIGERIA
B. AGRIC. (HONS.) PLANT SCIENCE
FACULTY OF AGRICULTURE
RAIN SEMESTER EXAMINATION 1988/89
PSC 508 - SEED PRODUCTION AND CERTIFICATION

AUGUST 1989

TIME ALLOWED: 2½ HOURS

Answer Question 1 (40 Marks) and any other THREE (20 marks each)

1. Provide brief answers to the following questions.

- (a) What are the differences between botanic seed and botanic grain? List five components of seed quality (10 marks)
- (b) Why is the knowledge of the mode of pollination in crop important in seed production and certification? (5 marks)
- (c) List and describe the three classes of seed and state the importance of each class in a seed production programme (10 marks)
- (d) Describe and state the advantages of compact area approach to seed production (5 marks)
- (e) How would you determine pure-live seed for a seed lot? What is the importance of pure-live seed in a seed production programme? (10 marks)

2. You are visiting a cowpea contract seed grower, who grows two classes of seed. During your visit, you made the following observations:

A. Isolation distance between farms was 25 m and the piece of land was being cropped for the first time.

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	<u>Foundation Seed</u>	<u>Certified Seed</u>
(i) No. of plants inspected	5,000	15,000
(ii) No. of off-type plants	400	4,000
(iii) No. of plants carrying disease	500	2,500
(iv) Yield of pure seed (kg)	8,000	20,000
(v) Other crop seed (kg)	500	800

Should this farm be certified or rejected? Explain your answer in detail (20 marks)

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3. Discuss the importance of the following in seed production
 - (i) varietal development, evaluation and release (5 marks)
 - (ii) Pre-release multiplication (5 marks)
 - (iii) Seed Production planning (5 marks)
 - (iv) Maintenance of genetic purity (5 marks)
4. List and briefly discuss TEN factors to be considered in building a seed processing plant (20 marks)
- 5(a) What have been the roles and achievements of the National Seed Service since its inception to date? (10 marks)
- (b) Considering the establishment of commercial seed companies in Nigeria, what changes would you expect in the roles of National Seed Service? (10 marks)