



# FIJI NATIONAL UNIVERSITY

College of Agriculture, Fisheries & Forestry

Department of Genetics and Plant Breeding

Bachelor of Agriculture- Year III

Trimester I- Final Examination – 2017

## GPB 701: PRINCIPLES OF SEED TECHNOLOGY

Time Allowed: 3.00 hours plus (10 minutes reading time) Total Marks: 100

### INSTRUCTIONS:

1. This paper consists of four pages including one page of answer sheet.
2. Please check to see that all your paper is complete.
3. Answer all the Objective Type Questions on the Answer Sheet and Descriptive Type Question in the Answer Booklet only.
4. **No written or printed material and mobile phones are allowed in the examination hall**
5. Marks allocated for each question appears at the side of each question so allocate your time accordingly.
6. This paper is divided into Two Parts. First Part contains Objective Type Questions which is having three Sections – A, B & C. All questions of this part are compulsory. Second part is Descriptive Type which is having three sections D, E & F.

### I. OBJECTIVE TYPE QUESTIONS (20 Marks)

To be answered only on the Answer Sheet Provided.

Section A	:	Choose the best answer.	(5Marks)
Section B	:	Fill in the blanks.	(5 Marks)
Section C	:	State True or False	(5 Marks)
Section D	:	One word terminology	(5 Marks)

### II. DESCRIPTIVE TYPE QUESTIONS (80 marks)

To be answered only on the Answer Booklet Provided.

Section E	:	Definition	(20 Marks)
Section F	:	Short notes	(30 Marks)
Section G	:	Essay Question	(30 Marks)

**I. Objective type questions**

*Note: Answer only on the ANSWER SHEET provided and return 30 minutes after the start of examination.*

**Time: 30 Minutes****Total Marks: 20****A. Choose the best answer****(5 X 1= 5 Marks)****A1. The isolation distance in brinjal for certified seed production**

- (A) 50 mts (B) 100 mts  
(C) 200 mts (D) 400mts

**A2. Generally which test is conducted to determine the quality of seeds?**

- (A) Purity test (B) Germination/Viability test  
(C) Moisture content test (D) All the above

**A3. Groundnut seed can be treated with**

- (A) Captan (B) Thiram  
(C) Captofol (D) All the above

**A4. The International Seed Testing Association was formed in the year**

- (A) 1924 (B) 1914  
(C) 1934 (D) 1935

**A5. The Nucleus seed can be produced by**

- (A) By breeder who developed the variety (B) Seed technologist  
(C) Seed testing agency (D) None of the above

**B. Fill in the blanks****(5 X 1= 5 Marks)**

- B1.** The isolation distance of \_\_\_\_\_ meter is recommended for certified seeds of rice.  
**B2.** The breeder seed should have \_\_\_\_\_ percentage genetic purity.  
**B3.** \_\_\_\_\_ is the optimum moisture content of castor during harvest.  
**B4.** Cytoplasmic Male sterile lines can be utilized for the development of commercial \_\_\_\_\_  
**B5.** \_\_\_\_\_ is the best technique to enhance the out crossing percentage of rice.

**C. State True or False****(5 X 1= 5 Marks)**

- C1.** The certified seeds must be free of seed borne diseases.  
**C2.** Defective seeds can be classified as inert material.  
**C3.** Johansson is the father of hybrid rice  
**C4.** Ten percentages of weedy seeds are permissible in certified seed production of tomato.  
**C5.** Rice is an often cross pollinated crop.

**D. Write down the correct one word terminology (5 X 1= 5 Marks)**

- D1. \_\_\_\_\_ seed produced by breeder and used as a d source of seed for the breeder seed
- D2. Refers to any plant part, which is used for raising the next crop
- D3. The single cross inbreds are crossed with the open pollinated variety to produce \_\_\_\_\_
- D4. \_\_\_\_\_ is taller than A line in hybrid rice production.
- D5. \_\_\_\_\_ sterile systems are followed to produce commercially successful hybrids in many crops.

**II. Descriptive type questions**

*Note: Answer only on the ANSWER BOOKLET provided.*

**E. Write Definition of the following –Any ten (10 X 2= 20 Marks)**

- |                        |                            |
|------------------------|----------------------------|
| E1. Seed               | E7. Flint corn             |
| E2. Genetic purity     | E8. Terazolium test        |
| E3. Nucleus seed       | E9. Roughing               |
| E4. Restorer line      | E10. Genetic deterioration |
| E5. Physical purity    | E11. Objectionable weed    |
| E6. Isolation distance | E12. Volunteer plants      |

**F. Write short notes on the following (Any Six) (6 X 5= 30 Marks)**

- F1. Explain in detail the scope and importance of seed technology in agricultural sciences.
- F2. Briefly explain various classes of seeds
- F3. What is seed test? Describe various tests for seed certification.
- F4. Differentiate grain and seed
- F5. Explain the characteristics of a quality seed.
- F6. Explain the factors of genetic deterioration
- F7. Seed production techniques of maize

**G. Write an essay on the following (Any two) (2 X 15=30 Marks)**

- G1. Write hybrid rice seed production technology with illustration.
- G2. What is seed certification? Explain the various certification requirements of certification procedure?
- G3. Write an essay about the grading, drying, seed treatment and processing and labeling techniques of seed.

The End  
XXXXXXXXXXXX



Date: .....

Marks obtained: .....

Name: .....

Student ID No.: .....

**B. Sc. (Agriculture) Trimester-I, Final Examination-2017**

**Unit Code/Title: GPB701-Principles of seed technology**

**Objective Type Questions - Answer Sheet**

**Total Marks: 20**

A.	A1.		
	A2.		
	A3.		
	A4.		
	A5.		
B.	B1		
	B2		
	B3		
	B4		
	B5		
C.	C1		
	C2		
	C3		
	C4		
	C5		
D	D1		
	D2		
	D3		
	D4		
	D5		

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