Student I D No..... Date: .....

FIJI NATIONAL UNIVERSITY

College of Agriculture, Fisheries & Forestry
School of Agricultural sciences
Department of Genetics and Plant Breeding
TRADE DIPLOMA in AGRICULTURE – YEAR 1
Trimester III- Final Examination – 2016
GPB 401- BASICS OF PLANT BREEDING AND SEED PRODUCTION

Time Allowed: 3.00 hours plus (10 minutes reading time) Total Marks: 50

INSTRUCTIONS:

This paper consists of 4 pages

1. Please check to see that your paper is complete
2. Answer the questions in the **answer sheet** for the **objective type questions** and answers the **descriptive questions** in your **answer booklet**. Number your answers correctly in the answer booklet
3. Write **your student ID number** on all the pages that you use including any additional sheet of paper
4. **Printed or written material and mobile phones are not allowed** into the examination hall
5. Mark values appear at the end of each question or part thereof

I. OBJECTIVE TYPE QUESTIONS (30 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	:	Match the following	(5 Marks)

II. DESCRIPTIVE TYPE QUESTIONS (30 marks)

There are **Twelve (12) & Three (3)** descriptive type questions provided on Section E , F , **attempt any Ten (10), Two (2) questions respectively** and write on the **Answer Booklet**.

Section E	:	Definitions	(10 Marks)
Section F	:	Essay Questions	(20 Marks)

Part I. Objective type questions

Note: Answer only on the Answer Sheet and return 30 minutes after the start of Examination.

A. Choose the best answer (5x 1= 5 Marks)

A1. Traditional varieties have wider genetic base, such varieties generally have
a. Less Yield
b. Biotic stress tolerance
c. Poor adaptability
d. All the above

A2. The phloem cell helps in the transportation of
A. Sugars
B. Water
C. Sugar and water
D. None of the above

A3. The gene which causes the death before reproductive stage is called as
A. Dominant gene
B. Incomplete dominance
C. Co-dominance
D. Lethal gene

A4. Which of the following is correct sequencing of mitosis?
A. Metaphase - Prophase - Anaphase - Telophase
B. Prophase - Metaphase - Anaphase - Telophase
C. Telophase - Prophase - Metaphase - Anaphase
D. Prophase - Telophase - Metaphase - Anaphase

A5 Which of the following in **not** an objective of Plant Breeding?
A. Higher yield
B. Biotic resistance
C. Dormancy
D. Increased susceptibility to minor pests and diseases

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

B1. Mitosis produces two daughter cells that are _____to the parent cell.

B2. Removal of off type plants is known as_____.

B3. _____involves division of the cytoplasm

B4.The ratio of dihybrid is _____

B5. Law of inheritance concept discovered by_____

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

C1. The term mutation was first coined by Hugo de vries (1901).
C2.The monhybrid ratio is 3:1
C3. DNA is Ribose Nucleic acid
C4. Formation of seed is part of reproduction cycle in plants.
C5. Rice belongs to poaceae family

D. Match the following. **(5x 1= 5 Marks)**

D1. Deoxy Ribose	-	Changing the heredity of the crop plants
D2.Plant Breeding	-	Law of Heredity
D3.The actual genetic makeup	-	Makes protein
D4. Ribisomes	-	Genotype
D5. Gregor Johan Mendel	-	DNA

II. Descriptive type questions

E. Definitions - Attempt Any TEN Questions
Each question carries two marks **(10 x 1 = 10 Marks)**

E1. Mutation
E2. Plant breeding
E3. Isolation distance
E4. Cell division
E5. Pollination
E6. Hermophordite flower
E7. Seed
E8. Genetic purity
E9. Grow out test
E10.Breeder seed
E11. Co dominance
E12. Dihybrid ratio

F. Write an essay (ANY TWO) for the following
Each question carries TEN marks ***(2 x 10 = 20Marks)***

F1. Scope and Importance of seed technology in agriculture
F2. Reasons for mechanical mixtures in seed production
F3. Aims and Objectives of plant breeding

The End

XXXXXXXXXXXX

Date: ..... Marks obtained: .....

Name: ..... Student I D No.: .....

Trade Diplomo in Agriculture- Trimester-III, Final Examination-2016

Unit Code/Title: GPB 401 –Basics of Plant Breeding and Seed Production

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		