



FIJI NATIONAL UNIVERSITY
College of Agriculture, Fisheries & Forestry
Department of Genetics & Plant Breeding
Bachelor of Agriculture- Year III
Trimester III- Final Examination - 2016
ABT 701: Agricultural Biotechnology

Time Allowed: 3.00 hours plus (10 minutes reading time) Total Marks: 75

INSTRUCTIONS:

1. This paper consists of five pages including two pages 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. The Answer sheet of the objective Type Questions will be collected **60 Minutes** after the start of Examination.
5. **No** written or printed material and mobile phones are allowed in the examination hall
6. Marks allocated for each question appears at the side of each question so allocate your time accordingly.
7. 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 (30 Marks) Time: 60 Minutes

Note: Answer only on the Answer Sheet and return 60 minutes after the start of Examination.

- Section A : Choose the best answer. (10 Marks)
Section B : Fill in the blanks. (10 Marks)
Section C : Match the following. (10 Marks)

II. DESCRIPTIVE TYPE QUESTIONS (45 marks) Time: 2hr: 15 Minutes

There are **Six (6)** questions on Section D, you attempt only **Five (5)**, followed by Section E contain **Four (4)** questions, do attempt only **Three (3)**, and then in Section F **Three (3)** questions are given, do attempt only **two (2)** from it.

Note: Answer only on the Answer Booklet provided.

- Section D : Definitions (10 Marks)
Section E : Short Answer (15 Marks)
Section F : Descriptive Question (20 Marks)

C. MATCH THE FOLLOWING:**(10x1 =10 Marks)****PART – A**

21. rBST
22. Bacteriocin
23. White biotechnology
24. Restriction enzyme
25. Plasmid
26. Crown gall
27. Annealing
28. Natural Clones
29. Callus
30. Plasticity

PART-B

- A. 45°-55°C
- B. Adapt to environmental conditions
- C. Cut the DNA
- D. DNA in bacteria
- E. Food bio-preservative
- F. Genes
- G. Identical Twins
- H. Increase milk production
- I. Industrial applications
- J. Parenchyma Cells
- K. Similar to tumors

II. DESCRIPTIVE TYPE QUESTIONS*Note: To be answered only on the ANSWER BOOKLET provided.***D. DEFINITIONS/NOTES - Attempt Any Five Questions (3-4 lines)***Each question carries TWO marks***(5 x 2 = 10 Marks)**

- | | |
|----------------------|---------------------|
| 31. Micropropagation | 34. Cloning |
| 32. Transgenics | 35. Differentiation |
| 33. Acclimatization | 36. Bt Genes |

E. SHORT ANSWER - Attempt Any Three Questions (1 Page each).*Each question carries Five marks***(3 x 5 = 15 Marks)**

37. Explain about transformation and two types of transformation
38. Explain about Ti Plasmid.
39. Explain the fundamental concepts of plant tissue culture (Totipotency, Morphogenesis and Plasticity)
- 40.

F. DESCRIBE THE FOLLOWING - Attempt Any Two Questions (2 Pages each).*Each question carries TEN marks***(2 x 10 = 20 Marks)**

41. Explain the process of animal cloning in detail. Eg. Dolly the sheep.
42. Explain Polymerase chain reaction in detail
43. How does *Bt* work? Explain the role of *Bt* genes in production of resistant varieties

The End**XXXXXXXXXXXXXX**

Date:

Marks obtained:

Name:

Student I D No.:

B. Sc. Agriculture Trimester-III, Final Examination-2016**Unit Code/Title: ABT 701 – Agricultural Biotechnology****I. Objective Type Questions - Answer Sheet**

Time: 45 Minutes

Total Marks: 30

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| A. | 1. | | |
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| B. | 11. | | |
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| | 13. | | |
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