

THE OPEN UNIVERSITY OF SRI LANKA  
B. Sc. DEGREE PROGRAMME – LEVEL 05 – 2006/2007  
Botany – BTU 3111/ BTE 5111 – Plant Breeding



ASSESSMENT TEST 2 – NO BOOK TEST (NBT)

Reg. No. \_\_\_\_\_

DURATION : ONE HOUR (3.30 - 4.30.p.m.)

DATE : 09.02.2007

**ANSWER ALL QUESTIONS**

This paper contains three (04) questions and six (06) pages)

1.

a) What is somaclonal variation ?

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b) Give three reasons for genetic instability in plant cell cultures.

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c) What are the factors that affect somaclonal variation ?

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d) Indicate the advantages and problems encounter with somaclonal variation.

*Advantages*

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*Problems*

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2.

a) What are somatic hybrids ?

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b) Why are somatic hybrids important ?

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c) Production of somatic hybrids involves a number of steps. What are they?

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d) What are "Cybrids"?

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e) Briefly describe the methods you use to confirm the hybridity of putative hybrid plants.

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3..

a) What is self-incompatibility ?

b) What is male sterility ?

c) What are the factors which determine Male Sterility ?

d) What are the applications of Male Sterility in Agriculture?

e) What is Apomixis ?

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f) Write down the four mechanisms you identify in seed development.

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4.

a) What are the two assumptions generally made in the development of seed production practices ?

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b) How many classes of certified seeds you can identify ?

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1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.

2. Next, it is important to gather relevant information and data. This can be done through research, consultation with experts, or by analyzing existing data sets.

3. Once the information is gathered, the next step is to develop a plan or strategy to address the problem. This often involves breaking down the problem into smaller, more manageable parts.

4. The fourth step is to implement the plan. This may involve conducting experiments, performing calculations, or applying theoretical concepts to real-world situations.

5. Finally, the results of the implementation should be evaluated. This involves comparing the outcomes against the original problem and determining whether the solution is effective and efficient.