

KERALA AGRICULTURAL UNIVERSITY  
B.Sc. (Ag) 2005 Admission VI Semester Final Examination  
October 2008

Pbgn 3204  
Seed Production and Certification (2+1)

Max. Marks: 60  
Time: 2½ hours

**PART I**

Marks 20 x 0.5 = 10

**IA. Fill in the blanks**

1. The mechanisms that helps cross pollination in maize is -----
2. Asexually propagated plants are -----.
3. Breeder seeds are affixed with ----- color tag.
4. Seed Act was enacted on -----.
5. Example for an endospermous seed -----

**IB. State True or False**

6. All hybrids are not certified seeds.
7. Bajra is Protoandrous.
8. The metabolic activity of seed at storage is high.
9. Bulk drying using silica gel is economical.
10. Presence of B line in A line is termed as pollen shedder

**IC. Choose the correct answer**

11. Seeds used for commercial production by the farmers  
a) Breeder seeds    b) Foundation seeds    c) Certified seeds    d) Nucleus seeds
12. Seeds replacement rate of Hybrids  
a) 100%            b) 75%            c) 50%            d) 25%
13. Maintainer lines are not necessary. ~~Set~~  
a) Two line breeding    b) Three line breeding    c) Male sterility system
14. Certification is done for  
a) Hybrids            b) Notified varieties            c) Parental seeds
15. NSC stands for  
a) National seed center    b) Notified seed center    c) National seed corporation

**ID. Give the name of**

16. Objectionable weed of paddy
17. Designated disease of Sorghum.
18. Top most screen in the Air screen graders
19. Male plants raised all sides of the field in hybrid seed production plot
20. Membrane that protects the developing plumule in gramineae.

**Part II**

Questions for short answers:

Marks 14 x 1 = 14

Distinguish between

1. Field standards and seed standards
2. Seed viability and seed vigour
3. Multiplication ratio and Replacement Rate
4. Sporogenesis and Gametogenesis

5. Fumigant and Desiccant

Define the following

6. Seed germination
7. Seed dormancy
8. Cob sorting
9. Planting ratio
10. Gametocide

Substantiate:

11. All seeds are grain but grains are not seeds
12. CGMS system is better than GMS system for hybrid seed production

Explain:

13. Field Counts
14. Detassling

### Part III

**Questions for Short Notes:** (Any EIGHT)

Marks 8 x 2 = 16

1. Group the seeds according to life span and discuss about the causes for loss of viability
2. Explain the Synchronisation techniques in hybrid seed production
3. How will you produce the Nucleus seeds for self pollinated varieties
4. Explain the role of mechanical admixtures in varietal deterioration
5. Describe the sampling intensity for seed lots in bags.
6. Write in short about the role of moisture and temperature in improving the seed storage.
7. Describe the procedures for conducting the grow out test.
8. Write in short on seed processing.
9. Why should we go for seed health testing
10. Explain the electrophoresis techniques for varietal identification.

### Part IV

**Short essays** (Any FIVE)

Marks 5 x 4 = 20

1. Discuss: How seed act and rules help in producing & distributing quality seeds to the farmers.
2. Explain in detail about the different methods used for estimation of seed moisture.
3. Explain the benefits of seed treatment. Describe the various types of seed treatments.
4. Describe the generation system of seed multiplication and Quality control.
5. Explain the principles procedures and evaluation of seedlings in germination test
6. Write in brief about the Indian seed industry.