

KERALA AGRICULTURAL UNIVERSITY  
B.Sc. (Ag) 2006 Admission VI Semester Final Examination  
July / August 2009

Pbgn 3204  
Seed Production and Certification (2+1)

Max. Marks: 60  
Time: 2½ hours

**PART I**

(20 × 5 = 100)

**IA. Fill in the blanks**

1. The fruit of sunflower is known as -----.
2. Pearl millet is a ----- pollinated crop.
3. Under PVP & FR Act varietal registration is valid for ----- years.
4. Journal published by ISST -----.
5. A class / <sup>that</sup> seed does not come under the purview of seed certification ~~is~~ -----.

**IB. State True or False**

6. Double cross hybrid is a first generation hybrid between two inbred lines.
7. Dry weight remains constant during ripening of seeds.
8. The metabolic activity of seed at storage is high.
9. Isolation distance for sorghum varietal seed production is 400 meters.
10. High temperature can be used for drying high moist seeds.

**IC. Choose the correct answer**

11. Specified quantity of seed, which is physically identifiable and homogenous  
a) Seed sample    b) Seed lot    c) Authenticate sample    d) Hand sample
12. Emasculation means removal of ----- flowers in monoecious crops.  
a) Staminate    b) Pistillate    c) Bisexual    d) Male parts
13. Acid used for tomato seed extraction -----.  
a) H<sub>2</sub>SO<sub>4</sub>    b) HCl    c) Nitric acid
14. Minimum seed germination requirement for certified seed of blackgram -----  
a) 80%    b) 75%    c) 65%    d) 85%
15. Seed multiplication ratio for Maize Hybrid -----  
a) 1:80    b) 1: 100    c) 1: 50

**ID. Give the name of**

16. The scar of attachment to the ovary in seeds
17. The site of entry of water into the seeds during imbibition.
18. Designated disease of cumbu
19. Plant varieties / Hybrids registered under sec. 5 of Seed Act.
20. Nutritive tissue originating from fertilization and retained at maturity in seeds as storage tissues.

## Part II

### II Questions for short answers: Distinguish between

Marks 14 x 1 = 14

1. Delinting / Decorticating
2. Normal / Abnormal seedlings
3. Maintainer line / Restorer line
4. Certified seeds / Labelled seeds
5. Seed / Grain

### Define the following

6. Vivipary
7. Dioecy
8. Equilibrium moisture content
9. Shedding tassel
10. Recalcitrant seed

### Substantiate:

11. During field inspection counting procedures should be followed.

### Explain:

12. Non restorer male line
13. Seed hardening
14. Porogamy

## Part III

### III Questions for Short Notes: (Any Eight)

Marks 8 x 2 = 16

1. Location of reproductive structures facilitates easy hybrid seed production.  
Explain
2. What is supplementary pollination
3. What are the causes for varietal deterioration
4. How you get the synchronized flowering in paddy hybrid production plot
5. What is self-incompatibility? How can we use that in hybrid seed production
6. Write in short about Air screen cleaner
7. Write in short about the male sterility systems.
8. Write a short notes on Fumigation.
9. Explain the importance of physiological maturity indices.
10. Explain the causes for ill filled seeds in sunflower.

## Part IV

### IV Short essays (Any Five)

Marks 5 x 4 = 20

1. Discuss: How seed certification agency helps in producing & distributing quality seeds to the farmers.
2. How will you estimate the seed moisture content and explain the role of moisture during storage .
3. How will you select the nuts for further multiplication in coconut.
4. Describe the seed production techniques of Groundnut.
5. Explain the procedures of quick viability test and uses of the same.
6. Discuss the recent developments in Indian seed industry.