

**M.Sc. Semester-I Examination, 2022**  
**(AGRICULTURE) IN GENETICS AND PLANT BREEDING**  
 PAPER: GPB 504  
**(VARIETAL DEVELOPMENT AND MAINTENANCE BREEDING)**

Full Marks: 50

Time: 2 Hours

**GROUP-A**1. Answer any **FIVE** questions from the following: 2 X 5 = 10

- a) Define seed.
- b) What is essentially derived variety?
- c) What is isolation distance?
- d) Differentiate between grain and seed?
- e) What is real value of seed?
- f) Explain detasseling.
- g) Explain peroxidase test of soybean seed.
- h) Explain carry over seed.

**GROUP-B**2. Answer any **FOUR** questions from the following: 5 X 4 = 20

- a) Write a short note on seed certification procedure.
- b) Explain plant breeder rights.
- c) Write down the different methods of seed purity analysis.
- d) Briefly explain intellectually property rights.
- e) Write a short note on central varietal release committee.
- f) What are the general principles of seed crop inspections?
- g) What is seed dormancy? Explain different methods of breaking dormancy. 1+4
- h) Briefly explains factors affecting seed vigour.

**GROUP-C**3. Answer any **TWO** questions from the following: 10 X 2 = 20

- a) Briefly explain the different classes of improved seed. 10
- b) Explain the different operations involved in quality seed production. 10
- c) Discuss the certified seed production of following crops: i. Double cross hybrid Maize ii. Hybrid sorghum. 5+5
- d) Discuss the Methods of maintenance of nucleus and breeder's seed in self-fertilized crops.