



Registration No:
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4th SEMESTER REGULAR EXAMINATION-NOV-2019
ST-243
Principles of Seed Technology
Time : 2 Hours Maximum : 50 Marks

(Answer all questions of Section – A)

SECTION – A

Q.1 Fill up the blanks with suitable and meaningful word(s): [10 × 0.5 = 5]

- (a) Minimum genetic purity standard for hybrid brinjal seed is_____.
- (b) Seeds Act was passed in the Indian Parliament on_____(date).
- (c) Minimum isolation distance in crossing block for hybrid rice seed production is_____.
- (d) Submitted sample size for rice is_____.
- (e) Emasculation of female parent for hybrid maize seed production is called_____.
- (f) The minimum seed certification standard for germination in groundnut seed is_____.
- (g) For a seed field of 6 hectares, the number of field counts to be taken during field inspection is_____.
- (h) Breeder seed should have a_____colour label.
- (i) The removal of lighter material from seed lot during processing by blast of air is termed as___.
- (j) The objectionable weed in seed crop of rice is_____.

Q.2. Define or explain the following in one or two sentences [5×1 = 5]

- (a) Physiological quality
- (b) Roguing
- (c) Developmental variation
- (d) Doak’s method in cotton.
- (e) Spiral separator

Q.3. Match the following [10×0.5 = 5]

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|---------------------------------|---|
| (a) Seeds (Control) Order, 1983 | (i) 80% (min.) |
| (b) Peroxidase test | (ii) Compulsory licensing of seed dealers |
| (c) Moisture pervious container | (iii) Seed borne disease |
| (d) Rice seed germination | (iv) Tetrazolium test |
| (e) One seeded fruit | (v) Gram |



- | | |
|--|--------------------------|
| (f) Inseparable other crop in barley | (vi) Zurich, Switzerland |
| (g) Seed viability | (vii) Surface texture |
| (h) Paddy bunt | (viii) Sunflower |
| (i) International Seed Testing Association | (ix) Gunny bag |
| (j) Roll mill | (x) Soybean |

Q.4. Write TRUE or FALSE against the following statements [10 x 0.5 = 5.0]

- (a) For certified seed production of maize, minimum isolation distance is 200 m.
- (b) *Chenopodium album* is an objectionable weed of wheat seed crop.
- (c) In air oven for moisture determination, oilseeds should be dried at 103⁰C for 17 hrs.
- (d) Hard seeds may be found in germination test of okra seeds.
- (e) The indented cylinder uses shape and size of seed to separate contaminants.
- (f) Seed certification agencies are notified under section 5 of the Seeds Act, 1966.
- (g) EC of seed leachate gives a good measure of the respiration rate of seed.
- (h) In purity analysis, broken seeds are taken as inert matter.
- (i) The Boerner divider uses centrifugal force for dividing seed samples.
- (j) A unit of certification should not be more than 10 hectare area.

SECTION – B: (Short Answer Questions)

(Attempt any five questions. Each question carries equal marks)[6.0 x 5 = 30.0]

- Q.5 Describe in brief the factors causing genetic deterioration of seed crops.
- Q.6 What is seed processing and what are its objectives ? Explain in brief the operation of the Air Screen Cleaner.
- Q.7 Describe in brief the procedure for single cross hybrid seed production in maize.
- Q.8 Why is grow out test conducted ? Explain in brief the procedure for conducting grow out test.
- Q.9 Define seed storage. What are the stages of seeds in storage ? Explain the method of controlling temperature and moisture/humidity in storage.
- Q.10 What is seed treatment and why is it needed ? Explain the categories of seed treating chemicals and the equipments used seed treatment.