

B.Sc. (Part—III) Semester—V Examination
SEED TECHNOLOGY
(Seed Pathology and Seed Entomology)

Time : Three Hours]

[Maximum Marks : 80

Note :—(1) All questions are compulsory.

(2) Draw well labelled diagrams wherever necessary.

1. (A) Fill in the blanks of the following :

(i) International _____ Authority has declared some prohibited areas as endemic and to avoid spread of disease in animals and plants. ½

(ii) The _____ foot pump equipment is used to dust calcium cyanide into rodent burrows, on exposure emerges a poisonous fume. ½

(iii) Bacterial pathogen are transferred from diseased seeds to healthy ones at the time of _____. ½

(iv) Reduced _____ intensities generally increase the susceptibility of plants to viral infection. ½

(B) Choose correct alternatives :

(v) The speed of germination of inoculum and its entry into the host are very much affected by the amount of _____ available.

(a) Heat (b) Moisture
(c) Temperature (d) Air ½

(vi) _____ acid is most common chemical useful in storing moist grain for a year.

(a) Hydrochloric (b) Nitric
(c) Propionic (d) Sulphuric ½

(vii) The toxicity of a dust formulation increases as the particle size _____.

(a) Neutral (b) Decreases
(c) Increases (d) None ½

(viii) Which of the insect pest attack over sorghum ?

(a) Phadka grasshopper (b) Shoot fly
(c) Sawfly (d) Plume moth ½

(C) (ix) What is meant by crop rotation ? 1

(x) What is meant by IPM strategies ? 1

(xi) What is the aim of disease management ? 1

(xii) Define seed health testing. 1

2. What is meant by storage fungi ? Give detail account of impact of storage fungi on animal and human health. 12

OR

Comment on :

(a) Mechanisms of seed transmission. 6

(b) Seed borne viral diseases and its pathological effects. 6

3. Discuss :
- (p) Procedure of sampling for seed health testing. 6
 - (q) Seed treatment procedures and advantages. 6
- OR**
- Explain in detail influence of environmental factors on seed borne diseases. 12
4. Comment on :
- (a) Methods of detecting test for seed borne plant viruses. 4
 - (b) International cooperation in seed pathology. 4
 - (c) Seed certification. 4
- OR**
- (p) Field inspection. 4
 - (q) Seed tolerance limits of seed borne pathogens. 4
 - (r) Seed act in relation to seed borne diseases. 4
5. Comment on :
- (a) Life cycle of insect. 4
 - (b) Important pests of Maize. 4
 - (c) Damage and management of insect pests of paddy. 4
- OR**
- (p) Economic entomology. 4
 - (q) Body structure of insect. 4
 - (r) Important pests of mustard. 4
6. Comment on :
- (a) Role of insect in seed production. 4
 - (b) Mechanical method of insect control. 4
 - (c) Insecticide formulations. 4
- OR**
- (p) Safe application of pesticides. 4
 - (q) Physical method of insect control. 4
 - (r) Social structure of honey bees. 4
7. Comment on :
- (a) Methods of fumigation. 4
 - (b) Definition and principles of Integrated Pest Management. 4
 - (c) Types of insect pests in storage. 4
- OR**
- (p) Seed protectants and its impact on seed viability. 4
 - (q) Plant protection equipments (any two). 4
 - (r) Maintenance of seed godowns. 4