

B.Sc. Part—III (Semester—V) Examination

5S : SEED TECHNOLOGY (Vocational)

(Seed Pathology and Seed Entomology)

Time : Three Hours]

[Maximum Marks : 80

N.B. :— (1) **ALL** question are compulsory.

(2) Draw well labelled diagrams wherever necessary.

1. (A) Fill in the blanks of the following : 2
- (i) IPM means ———.
 - (ii) ——— is the optimum temperature for insect development.
 - (iii) Honey bees are best insects ———.
 - (iv) In wheat disease loose smut of wheat pathogen is embedded in ———.
- (B) Choose appropriate alternative : 2
- (v) The most important environmental factor in spore dissemination is ———.
 - (a) Moisture
 - (b) Temperature

- (c) Wind
- (d) Light.
- (vi) Storage purpose seed must be dried to moisture content less than ———.

 - (a) 10 %
 - (b) 11 %
 - (c) 13 %
 - (d) 14 %

- (vii) Microorganism like ——— seed infections are adversely affected by free water.

 - (a) Fungi
 - (b) Virus
 - (c) Bacteria
 - (d) None.

- (viii) If the treated seeds are to be stored in Godown, moisture content must be kept at ———.

 - (a) Normal
 - (b) High
 - (c) Low
 - (d) None.

- 7. Comment on :
 - (a) Methods of fumigation. 4
 - (b) Plant Protection Instruments. 4
 - (c) Factors affecting control of mites in storage. 4

OR

- (m) IPM strategies for important pests. 4
- (n) Control methods of rodents in field. 4
- (o) Detection of Infestation. 4

- (C) Answer in **one** sentence : 4
- (ix) Define objectives of seed health testing.
 - (x) What is sampling ?
 - (xi) What is best method to control rodents in storage ?
 - (xii) What is importance of Bee keeping ?

2. Discuss :

- (a) History of seed pathology in India. 6
- (b) Mechanism of seed transmission. 6

OR

- (m) Impact of storage fungi on animals and human health. 6
- (n) Seed borne bacteria. 6

3. Comment on :

- (a) Seed treating equipments. 4
- (b) Effect of light on seed borne diseases. 4
- (c) Quarantines of seed health testing. 4

OR

- (m) Procedure of seed health treatment. 4
- (n) Effect of temperature on seed borne diseases. 4
- (o) Equipments essential for seed-treatments. 4

4. Comment on :
- (a) International Co-operation in seed pathology. 4
 - (b) Seed certification. 4
 - (c) Seed act in relation to seed borne diseases. 4

OR

- (m) National Co-operation in seed pathology. 4
 - (n) Methods of seed health testing. 4
 - (o) Tolerance limit of seed borne pathogens. 4
5. Comment on :
- (a) Methods of insect classification. 4
 - (b) Important pest of Sorghum. 4
 - (c) Appendages of Insects. 4

OR

- (m) Economic importance of pests of pulses. 4
 - (n) Insect-pests of vegetables. 4
 - (o) Damages caused by insects to Groundnut. 4
6. Discuss chemical and physical methods of Insect Control. 12

OR

Discuss the process of formulation of Insecticides and comment on safe application of pesticides. 12