

Rayat Shikshan Sanstha's

Yashavantrao Chavan Institute of Science, Satara (Autonomous)

DEPARTMENT OF BOTANY

SEED TECHNOLOGY

Semester IV

Theory Paper VII (BBST 401) Seed Pathology and Seed Entomology

Question Bank

Q. 1 Define following term/Answer in one sentence.

1. Define seed pathology.
2. Who is the father of seed pathology?
3. Where the first seed pathology laboratory is established.
4. Enlist the seed borne disease.
5. What is seed health?
6. Seed borne pathogens are classified into how many classes?
7. Define Seed disinfestations?
8. What is Seed borne diseases?
9. Enlist any two losses caused by seed borne pathogens.
10. Enlist any two Preventive measures to control seed borne pathogens.
11. What is plant quarantine?
12. Write any two losses caused by insect pest.
13. Define Complete Metamorphosis.
14. Define Incomplete Metamorphosis.
15. Define seed entomology.
16. What are biological control agents?
17. Enlist beneficial insects.
18. Which equipment is used for seed dressing?
19. Write life cycle stages of complete metamorphosis?
20. Write scientific name of Rust red flour beetle.
21. Write scientific name of Indian meal moth.

22. Write scientific name of Brinjal Fruit Borer.
23. Write scientific name of Gram Pod Borer.
24. Write scientific name of Lesser Grain borer.
25. Write scientific name of Rice Weevil.
26. Write scientific name of Khapra beetle.
27. Write scientific name of Pulse beetle.
28. Write scientific name of Saw-toothed beetle.
29. How many stages are found in incomplete type of metamorphosis?
30. Enlist harmful insects.

Q. 2 Answer the following questions in details (Long Answer).

1. Describe history and Importance of Seed Pathology.
2. Describe prevention methods used against Seed Borne Pathogens.
3. Describe in detail seed borne diseases.
4. Explain in detail Losses caused by seed pathogens.
5. What is seed infection? Describe Significance of Infection.
6. Describe Preventive measures for seed borne pathogens.
7. Describe history and importance.
8. Describe in detail Losses caused by insects.
9. Describe Indian Meal Moth with respect to scientific name, marks of identification, nature of damage and their management.
10. Describe Brinjal Fruit Borer with respect to scientific name, marks of identification, nature of damage and their management.
11. Describe Gram Pod Borer with respect to scientific name, marks of identification, nature of damage and their management.
12. Describe Lesser Grain Borer with respect to scientific name, marks of identification, nature of damage and their management.
13. Describe Rust Red Four Beetle with respect to scientific name, marks of identification, nature of damage and their management.
14. Describe Rice Weevil with respect to scientific name, marks of identification, nature of damage and their management.

15. Describe Khapra Beetle with respect to scientific name, marks of identification, nature of damage and their management.
16. Describe Pulse Beetle with respect to scientific name, marks of identification, nature of damage and their management.
17. Describe Saw Toothed Beetle with respect to scientific name, marks of identification, nature of damage and their management.
18. Define seed entomology. Describe in detail complete type of metamorphosis.
19. What is seed entomology? Describe in detail in complete type of metamorphosis.
20. Explain in detail mechanism of transmission of seed pathogens.

Q. 3 Answer the following questions in short (Short notes).

1. Losses caused by seed borne pathogens.
2. Physical methods used to control seed borne pathogens.
3. Cultural methods used to control seed borne pathogens.
4. Types of seed borne pathogens.
5. Plant quarantine.
6. Methods of used for Seed Treatment.
7. Describe seed borne diseases.
8. History of seed pathology.
9. Chemical methods used to protect seed borne pathogens.
10. History and Importance of Seed Pathology.
11. Preventive measures of seed borne pathogens
12. Significance of Infection of seed infection.
13. Mechanism of Transmission of seed pathogens.
14. History and Importance seed pathology
15. Complete metamorphosis
16. In complete metamorphosis
17. Losses caused by insects
18. Indian meal moth
19. Brinjal fruit borer
20. Gram pod borer
21. Lesser Grain borer

22. Rust red flour beetle
23. Rice Weevil
24. Khapra beetle
25. Pulse beetle
26. Fungal seed borne diseases
27. Bacterial seed borne diseases
28. Seed pathology
29. Seed entomology
30. Gradual metamorphosis

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SEED TECHNOLOGY

Theory Paper VIII Resent Trends In Seed Production (BBST 402)

Question Bank

Define following term/Answer in one sentence

1. Define heterosis.
2. Define male sterility.
3. Define self-incompatibility.
4. Define GM crop.
5. Define cytoplasmic male sterility.
6. Who proposed the term heterosis?
7. Define dominance hypothesis.
8. Define genetic male sterility.
9. Define environmental sterility.
10. Define cytoplasmic genetic male sterility.
11. Define synthetic seed.
12. Define over dominance hypothesis.
13. Define photoperiod sensitive male sterility.
14. Define hybrid vigor.
15. Define temperature sensitive male sterility.
16. Types of self-incompatibility.
17. Any two advantages of self-incompatibility
18. Any two disadvantages of self-incompatibility.
19. How many types of breaking self-incompatibility?
20. Define pollen irradiation.
21. Define haploid seed production.
22. Define cybrids

Q. 2 Long Answer question

1. Explain in brief heterosis.
2. Define male sterility and explain in brief genetic male sterility.

3. Define self-incompatibility, types and its merits and demerits.
4. Define heterosis and explain in brief its types.
5. Explain in brief cytoplasmic male sterility and explain its utilization.
6. Define self-incompatibility and methods of breaking incompatibility.
7. Define self-incompatibility and explain classification of heteromorphic and homomorphic system.
8. Explain cytoplasmic genetic male sterility and its limitations.
9. Describe inbreeding depression and hybrid vigour.
10. Explain in brief GM crop.
11. Explain in brief synthetic seed production and cybrids.
12. Define heterosis list its characteristic features and discuss its application and achievement in crop improvement.
13. Define inbreeding depression and hybrid vigor. How does this phenomenon affect the self- and cross-pollinated species? Explain with the suitable examples.

Q. 3 Short Notes

1. Inbreeding depression
2. Limitations of genetic male sterility
3. Methods of breaking self-incompatibility
4. Haploid seed production
5. Soma clonal variation
6. Difference between sterility and self-incompatibility.
7. Phenotypic expression of male sterility.
8. Types of genetic male sterility.
9. Utilization of genetic male sterility.
10. Difference between sterility and self-incompatibility.
11. Synthetic seed production.
12. Types of heterosis fix in plant.
13. Maintenance of male sterile line.
14. Manifestation of heterosis.
15. classification of self-incompatibility.
16. Limitation of cytoplasmic male sterility
17. Biotechnological application of haploid seed production
18. Fixation of heterosis.
19. 19)Physiological basis of heterosis

20. Transgenic male sterility
21. R line (Restore line)
22. Environment sensitive genetic male sterility