

SEMESTER – VI

Paper-II : Aquaculture and Pest Management-II

External Marks : 40

Internal Assessment: 10

Time allowed : 3 Hours

Note: Nine questions are to be set in all and the candidates are required to attempt five questions including the compulsory question

1. Question 1 is compulsory consisting of 10 parts (1.5 marks each) covering the entire syllabus. Answer to each part should not exceed 20 words.
2. Out of remaining eight, four questions are to be set from each section A & B, possibly splitting them in parts. Candidates are required to attempt four questions, two from each section.

SECTION-A

1. **Seed production:** Natural seed resources – its assessment, collection, Hatchery production
2. **Nutrition:** Sources of food (Natural, Artificial) and feed composition (Calorie and Chemical ingredients).
3. **Field Culture:** Ponds-running water, recycled water, cage, culture; poly culture.
4. **Culture technology:** Biotechnology, gene manipulation and cryopreservation of gametes.

SECTION-B

5. **Stored grains:**
 - (a) Pulse beetle (*Callosobruchus maculatus*)
 - (b) Rice weevil (*Sitophilus oryzae*)
 - (c) Wheat weevil (*Trogoderma granarium*)
 - (d) Rust Red Flour beetles (*Tribolium castaneum*)
 - (e) Lesser grain borer (*Rhizopertha dominica*)
 - (f) Grain & Flour moth (*Sitotroga cerealella*)

Their systematic position, habits and nature of damage caused. Life cycle and control of *Trogoderma granarium*.

6. **Insect control:** Biological control, its history, requirement and precautions and feasibility of biological agents for control.

7. **Chemical control:** History, Categories of pesticides. Important pesticides from each category to pests against which they can be used. Insect repellants and attractants.
8. Integrated pest management.
9. Important bird and rodent pests of agriculture & their management.