

PARUL UNIVERSITY
COLLEGE OF AGRICULTURE

B.Sc. (Hons.) Agriculture Summer 2018-19 Examination

Semester: 5

Date: 20/04/2019

Subject Code: 20104301

Time: 02:00 pm to 04:30 pm

Subject Name: Crop pests and stored grain pests and their management

Total Marks: 60

Instructions

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Do as Directed.**A. Fill in the blanks. (Each of 1.00 marks)****(10)**

1. _____ is the minute stored grain insect pest.
2. _____ is the polyphagous pest and feed voraciously on all types of crops.
3. _____ parasitizes larvae of *Corcyra cephalonica*.
4. _____ is the scientific name of Khapra beetle.
5. _____ and _____ virus transmits by green leaf hopper.
6. _____ is the damaging stage of pulse beetle.
7. Lesser grain borer classified under _____ category.
8. *Epiricania melanoleuca* is an important parasitoid of _____
9. _____ tablets of Aluminum phosphide used per ton of grains
10. Honey dew secretion by _____ structure of aphid.

B. Multiple choice type questions. (Each of 1.00 mark)**(10)**

1. Scientific name of Red rust flour beetle _____
 - a) *Rhyzopertha dominica*
 - b) *Tribolium castaneum*
 - c) *Trogoderma granarium*
 - d) *Lasioderma serricornis*
2. Damaging stage of Indian meal moth is _____
 - a) Larvae
 - b) Pupae
 - c) Adult
 - d) None of above
3. Fumigants used for stored grain pests _____
 - a) Aluminium phosphide
 - b) Ethylene Dibromide
 - c) Both a and b
 - d) Zinc Phosphide
4. Grassy stunt virus disease transmit by _____
 - a) Green leaf hopper
 - b) White backed plant hopper
 - c) Brown plant hopper
 - d) None of above
5. Notching of leaf margins by adults of _____ pest
 - a) Hadda beetle
 - b) Ash weevil
 - c) Stone weevil
 - d) Gundhi bug
6. New emerging invasive pest recently reported from Karnataka is _____
 - a) *Spodoptera frugiperda*
 - b) *Spodoptera exigua*
 - c) *Spodoptera litura*
 - d) None of above
7. Scientific name of Brinjal fruit and shoot borer _____
 - a) *Eublemma olivacea*
 - b) *Leucinodes orbonalis*
 - c) *Epilachna duodecastigma*
 - d) *Amrasca biguttula*
8. _____ causing formation of a tube like gall that is similar to "onion leaf" or "Silver-shoot".
 - a) *Nymphula depunctalis*
 - b) *Orseolia oryzae*
 - c) *Pelopidas mathias*
 - d) *Scirpophaga incertulas*
9. Pigeon pea sterility mosaic virus disease transmits by _____
 - a) Aphid
 - b) Eriophid mite
 - c) Whitefly
 - d) Jassid
10. Scientific name of Painted bug _____
 - a) *Bagrada hilaris*
 - b) *Psalis pennatula*
 - c) *Pelopidas mathias*
 - d) *Hieroglyphus banian*

Q.2 Do as Directed.

A. Define the following. (Any five)

(05)

1. Hopper burn
2. Pest outbreak
3. Polyphagous pest
4. Hot spot
5. External feeders
6. Primary pests
7. Pygidium

B. Answer the following. (Any Five)

(05)

1. Any two reference books of crop pests and stored grain pests and their management
2. Difference between primary pests and secondary pests
3. Difference between dry grain heating and wet grain heating
4. Advantages and disadvantages of earthen pots
5. Give names of three monophagous pests of fruit crops
6. Give any five primary stored grain pests names.
7. Difference between rice moth and rice weevil

Q.3 Write short notes. (Any five)

(15)

1. Traditional storage structures
2. Nature of damage of lesser grain borer and rice weevil
3. Nature of damage of cotton pink bollworm and American boll worm
4. Nature of damage of mustard sawfly and sorghum shoot fly
5. Factors affecting stored grain insect damage
6. Nature of damage of rice brown plant hopper and castor semilooper

Q.4 Attempt any Three/Long Questions/Example

(15)

1. Management/ control measures of stored grain pests
2. State practicable components of Integrated Pest Management of important pests of rice and sorghum
3. State practicable components of Integrated Pest Management of important pests of cotton and brinjal
4. State practicable components of Integrated Pest Management of important pests of groundnut and redgram