

RET/15/Test B**743****Entomology & Ag. Zoology****17**Question Booklet No. **70**.....(To be filled up by the candidate by **blue/black ball-point pen**)

Roll No.

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Roll No. (Write the digits in words)

Serial No. of OMR Answer Sheet

Day and Date

(Signature of Invigilator)

INSTRUCTIONS TO CANDIDATES(Use only **blue/black ball-point pen** in the space above and on both sides of the **Answer Sheet**)

1. Within 10 minutes of the issue of the Question Booklet, Please ensure that you have got the correct booklet and it contains all the pages in correct sequence and no page/question is missing. In case of faulty Question Booklet, bring it to the notice of the Superintendent/Invigilators immediately to obtain a fresh Question Booklet.
2. Do not bring any loose paper, written or blank, inside the Examination Hall **except the Admit Card without its envelope**.
3. **A separate Answer Sheet is given. It should not be folded or mutilated. A second Answer Sheet shall not be provided.**
4. Write your Roll Number and Serial Number of the Answer Sheet by pen in the space provided above.
5. On the front page of the Answer Sheet, write by pen your Roll Number in the space provided at the top, and by darkening the circles at the bottom. Also, wherever applicable, write the Question Booklet Number and the Set Number in appropriate places.
6. **No overwriting is allowed in the entries of Roll No., Question Booklet No. and Set No. (if any) on OMR sheet and Roll No. and OMR sheet No. on the Question Booklet.**
7. **Any changes in the aforesaid-entries is to be verified by the invigilator, otherwise it will be taken as unfair means.**
8. **This Booklet contains 40 multiple choice questions followed by 10 short answer questions. For each MCQ, you are to record the correct option on the Answer Sheet by darkening the appropriate circle in the corresponding row of the Answer Sheet, by pen as mentioned in the guidelines given on the first page of the Answer Sheet. For answering any five short Answer Questions use five Blank pages attached at the end of this Question Booklet.**
9. For each question, darken only one circle on the Answer Sheet. If you darken more than one circle or darken a circle partially, the answer will be treated as incorrect.
10. **Note that the answer once filled in ink cannot be changed.** If you **do not wish to attempt** a question, leave all the circles in the corresponding row blank (such question will be awarded zero marks).
11. For rough work, use the inner back page of the title cover and the blank page at the end of this Booklet.
12. Deposit both OMR Answer Sheet and Question Booklet at the end of the Test.
13. You are not permitted to leave the Examination Hall until the end of the Test.
14. If a candidate attempts to use any form of unfair means, he/she shall be liable to such punishment as the University may determine and impose on him/her.

Total No. of Printed Pages : 15

FOR ROUGH WORK

Research Entrance Test – 2014

No. of Questions : 50

Time : 2 Hours

Full Marks : 200

- Note :** (i) This Question Booklet contains **40** Multiple Choice Questions followed by **10** Short Answer Questions.
- (ii) Attempt as many MCQs as you can. Each MCQ carries **3 (Three)** marks. **1 (One)** mark will be deducted for each incorrect answer. Zero mark will be awarded for each **unattempted** question. If more than **one** alternative answers of MCQs seem to be approximate to the correct answer, choose the closest one.
- (iii) Answer only 5 Short Answer Questions. Each question carries **16 (Sixteen)** marks and should be answered in **150-200** words. Blank **5 (Five)** pages attached with this booklet shall only be used for the purpose. Answer each **question on separate page**, after writing Question No.

1. "Fluid mosaic model" relates to the structure of :

(1) Cell wall	(2) Protoplasm
(3) Plasma membrane	(4) Nucleic acid
2. Spongy tissue of mango is a :

(1) Bacterial disease	(2) Physiological disease
(3) Viral disease	(4) Fungal disease
3. A purpose of initiating a conscious and purposeful action is called :

(1) Education	(2) Motivation	(3) Action	(4) Coordination
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4. Yellow colour of egg is due to :

(1) Carotene	(2) Xanthophyll	(3) Anthocyanin	(4) Vitamin B
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5. During prophase-I of meiosis crossing over occurs at :

(1) Zygotene	(2) Pachytene	(3) Diplotene	(4) Diakinesis
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6. In which crop the use of Blue-Green Algae as a bio-fertilizer will be most useful ?

(1) Maize	(2) Potato	(3) Rice	(4) Sugarcane
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7. Lycopene pigment is present in :

(1) Beetroot	(2) Tomato	(3) Radish	(4) Chilli
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8. Ooze test is done to detect :

(1) Bacterial disease	(2) Fungal disease
(3) Viral disease	(4) All of these
9. Number of chromosome in wheat endosperm is :

(1) 21	(2) 42	(3) 63	(4) 14
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10. Acridine orange is used for inducing :

(1) DNA denaturation	(2) Mutagenesis
(3) Chiasma formation	(4) Bacterial transduction

(2)

11. Insecticide act was enforced first time in the year of :
(1) 1948 (2) 1958
(3) 1968 (4) 1978
12. Indian Journal of Entomology is published from :
(1) IARI, New Delhi (2) ICAR, New Delhi
(3) ICMR, New Delhi (4) CSIR, New Delhi
13. 'Hopper burn' is caused by :
(1) Rice green leaf hopper (2) Grass hopper
(3) Brown plant hopper (4) Cohite Backed plant hopper
14. Cornicle is found in :
(1) Lady Bird beetle (2) Rice grain moth
(3) Aphids (4) Stem borer
15. *Chrysoperla cernea* is a :
(1) Parasite (2) Pest
(3) Parasitoid (4) Predator
16. The excretory organ in insect is :
(1) Malpighian Tubules (2) Rectum
(3) Anus (4) Hind gut
17. Cerci is located in :
(1) Head (2) Prothorax
(3) Metathorax (4) Abdomen
18. Ecdysis mean :
(1) Laying of Eggs (2) Going under Pupaation'
(3) Larval duration (4) Casting of skin

19. Which one of the following is a connecting link between Apterygota and Pterygota :
- (1) Japygidae (2) Lepismatidae
(3) Coccidae (4) Phasmidae
20. Johnston's organs are found in all adult insects except in :
- (1) Grylloblatoidae (2) Aphididae
(3) Tenthrealinidae (4) Diplura
21. The age interval of stage of development in life table studies is represented by :
- (1) x (2) $d \times$
(3) $d \times f$ (4) $s \times$
22. In which of the following the mouth parts are asymmetrical :
- (1) Silverfish (2) Thrips
(3) Butterfly (4) Bugs
23. Universal antidote is a mixture of :
- (1) Charcoal & Lime
(2) MgO & Charcoal
(3) Activated Charcoal, tannic acid & MgO
(4) Activated Charcoal & talc
24. Earliest documented case of insect resistance is against :
- (1) Sorghum shoot fly (2) Screw worm fly
(3) Hessian fly (4) Wheat stem fly
25. Who for the first time studied Indian insect type :
- (1) Linnaeus (2) Koenig
(3) Fabricius (4) Lefory

26. Which of the fly is pest of cotton :
- (1) Fruit fly (2) White fly
(3) Stem fly (4) Saw fly
27. *Aphelinus mali* has been a successful parasite in controlling :
- (1) Tobacco caterpillar (2) Apple woolly aphid
(3) Maize stem borer (4) Sugarcane top borer
28. *Bacillus thuringiensis* is most effective at pH :
- (1) 1.3 to 6 (2) 2.9 to 10
(3) 11 to 14 (4) All of above
29. *Rodolia cardinalis* has been successful in controlling :
- (1) Apple woolly aphid (2) Cottony cushion scale
(3) Sugarcane shoot borer (4) Pink boll worm
30. Which of the following is systemic insecticide :
- (1) Parathion (2) Malathion
(3) Imidacloprid (4) Carbofuran
31. *Aceria cajani* is responsible for disease :
- (1) FMV (2) SMD
(3) DEMV (4) WSMV
32. Which of the following insecticides is based on a compound found in bacteria :
- (1) Fipronil (2) Spinosad
(3) Acephate (4) Acetamiprid
33. Indoxacarb belongs to which group of insecticides :
- (1) Carbamates (2) Organophosphates
(3) Nicotinoids (4) Oxadiazine

34. Which one of the following is present in the haemolymph of majority of insects ?
- (1) Trehalose (2) Glucose
(3) Sucrose (4) Fructose
35. *Zygogramma bicolorata* feeds on :
- (1) Water hyacinth (2) Orabanche
(3) Parthenium (4) Saccharum
36. NCIPM is located at :
- (1) Hyderabad (2) Bangalore
(3) New Delhi (4) Faridabad
37. If equilibrium population level of a crop damaging insect is above the economic injury level, it is a :
- (1) Regular Pest (2) Potential Pest
(3) Not a Pest (4) Sporadic Pest
38. The larvae of house fly is known as :
- (1) Caterpillar (2) Maggot
(3) Grub (4) Nymph
39. The Directorate of Plant Protection, Quarantine and Storage is situated at :
- (1) Gurgaon (2) New Delhi
(3) Faridabad (4) Hisar
40. The density of pest population at which control measures should be applied :
- (1) GEL (2) PBL
(3) ETL (4) EIL

Attempt any five questions. Write answer in 150-200 words. Each question carries 16 marks. Answer each question on separate page, after writing Question Number.

1. Classify the insecticides based on Chemical nature, mode of entry and mode of action.
2. What is food chain and food web ? Discuss the components of food web.
3. What is host plant resistance ? Describe the various mechanisms of plant resistance.
4. Write short notes on
 - (1) Peritrophic membrane
 - (2) Cryptonephridial system
5. Describe the role of biotechnology in Insect Pest Management.
6. Differentiate between biological control and natural control and describe the cultural and mechanical tools of pest management.
7. Define the term Integrated Pest Management and how it differs from Integrated Pest Control.
8. Describe the different kind of mouth parts and antennae found in insects.
9. Write the common & scientific names of three phytophagous mites and describe the management of phytophagous mites in general.
10. Write the nature of damage and management of any two insect pests of plantation crops.

Roll No. :

Q. No. :

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(10)

Roll No. :

Q. No. :

Roll No. :

Q. No. :

FOR ROUGH WORK

