

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END THEORY EXAMINATION

B.Sc.(Hons.) Horticulture

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|------------|----------------------|-------|------------------------------|---------------|-----------|
| Semester | : II (New) | Term | : Second | Academic Year | : 2022-23 |
| Course No. | : H/ENTO 121 | Title | : Fundamentals of Entomology | | |
| Credits | : 3 (2+1) | | | | |
| Day & Date | : Mondny, 07.08.2023 | Time | : 9:00 to 12:00 hrs. | Total Marks | : 80 |

- Note :
1. Solve ANY EIGHT questions from SECTION 'A'.
 2. All questions from SECTION 'B' are compulsory.
 3. All questions carry equal marks.
 4. Draw neat diagram wherever necessary.

SECTION 'A'

- Q.1 Describe the structure of digestive system of cockroach with well labeled diagram.
- Q.2 Give the distinguishing characters of order Diptera and enlist its four important families with one example each.
- Q.3 Explain different types of wing coupling apparatus in insects with suitable examples.
- Q.4 Explain in detail how insects are related to human beings.
- Q.5 State the distinguishing characters of order Orthoptera and enlist its four important families with one example each.
- Q.6 Describe the mouth parts of grasshopper along with well labeled diagram.
- Q.7 Define metamorphosis and describe its types with suitable examples.
- Q.8 State the distinguishing characters of order Lepidoptera and enlist its four important families with one example each.
- Q.9 Describe the male reproductive system of cockroach with well labeled diagram.
- Q.10 Write short notes on (Any Two):
- a) Types of head positions in insects
 - b) Binomial nomenclature and its rules
 - c) Functions of insect integument

SECTION 'B'

- Q.11 a) State the exact location of the following parts in/on insect body:
- 1) Cerci
 - 2) Malpighian tubules
 - 3) Johnston's organ
 - 4) Arolium
- b) Fill in the blanks:
- 1) Mites belong to the class _____.
 - 2) National Bureau of Agricultural Insects Resources is located in _____.
 - 3) _____ is the segment of leg present between coxa and femur.
 - 4) Study of arrangement of setae is known as _____.

(P.T.O.)

Q.12 Match the pairs:

'A'

- 1) Honeybee
- 2) Plant bugs
- 3) Dungroller
- 4) House fly
- 5) Metallic beetle
- 6) Thrips
- 7) Butterfly
- 8) Cockroach

'B'

- a) Fringed wings
- b) Halteres
- c) Tegmina wings
- d) Clavate antenna
- e) Hemelytra wings
- f) Lamellate antenna
- g) Geniculate antenna
- f) Serrate antenna

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