

**2020**

**ZOOLOGY — HONOURS**

**Paper : SEC-A-1**

**(Apiculture)**

**Full Marks : 80**

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words  
as far as practicable.*

**Group - A**

1. Answer **any twenty** questions :

2×20

- (i) What is pollen basket?
- (ii) Write the scientific names of *any two* commercially used honeybees.
- (iii) Name two bee keeping research and training centres in India.
- (iv) What is swarming?
- (v) Write about the uses of honey.
- (vi) What is the significance of bee dance?
- (vii) What is honey flow period?
- (viii) What is the role of a drone in bee colony?
- (ix) What is smoker?
- (x) Name two pheromones used by bees.
- (xi) What are brood cells?
- (xii) What is foraging?
- (xiii) What is bee pasturage?
- (xiv) In which part of the honeycomb storage cells are generally found?
- (xv) How propolis is used?
- (xvi) Where from bee venom is produced?
- (xvii) Write the composition of royal jelly.
- (xviii) Why is honeybee regarded as a polymorphic species?
- (xix) What happens to a queenless hive?
- (xx) What is 'darth period'?

**Please Turn Over**

- (xxi) What are the functions of pollen spur?
- (xxii) Name a solitary bee species.
- (xxiii) What does a supersedure cell look like?
- (xxiv) Write down the use of bee-veil.
- (xxv) Name two tools/instruments used in honey extraction.
- (xxvi) Name two avian enemies of bees.
- (xxvii) What is bee venom?
- (xxviii) Define propolis.
- (xxix) Write the name of one Non-Apis honeybee.
- (xxx) Define 'Nuptial flight'.

### Group - B

#### 2. Answer *any eight* questions :

- (i) Discuss the causative agent, symptoms and control measures of *any two* diseases in bees. 2½+2½
  - (ii) Mention four prospects and four problems of modern apiculture industry in India. 2½+2½
  - (iii) Write short notes on the following :
    - (a) Bee bread
    - (b) Bee wax. 2½+2½
  - (iv) Mention the characters of *any two* castes of honeybee. 2½+2½
  - (v) With a word diagram describe the different stages in life cycle of *Apis indica*. 5
  - (vi) Write an account on the Newton box with diagram. 5
  - (vii) How do moths affect the bees and how are they controlled? 2½+2½
  - (viii) Mention the chemical composition of honey. Write two uses of honey. 3+2
  - (ix) Write a note on prevention of swarming in bees. 5
  - (x) Briefly describe the architecture of bee comb. 5
  - (xi) Mention any one fungal disease, its causative agent, symptoms and control affecting the larva of honeybees. 1+1+2+1
  - (xii) Write a note on the preservation of honey. 5
  - (xiii) Explain how honey is formed from nectar. 5
-