

4. Give an account of the following

- (m) Criteria to meet the demands of local habitat. 4
- (n) Honey yield. 4
- (o) Absconding. 4

OR

- (p) Discretion. 4
- (q) Disease resistance. 4
- (r) Desirable and undesirable characters of honey bee with reference to selection criteria. 4

5. Give an account of pedigree record system and uniform conditions for pedigree comparison.

OR

Explain the tabulation and individual colony records. 12

6. Describe rearing of pedigree queen bees and migration for queen rearing programme.

OR

7. Explain maximizing superior mating and minimizing inferior mating. 12

AR - 601

Fifth Semester B.Sc. (Part - III) Examination

APICULTURE

Paper - V

(Cytogenetics and Bee Breeding)

P. Pages : 5

Time : Three Hours]

[Max. Marks : 80

- Note :** (1) All question are compulsory.
 (2) Question number **One** carry **Eight** marks and remaining questions carry **Twelve** marks each.
 (3) Illustrate your answer with suitable diagrams wherever necessary.

1. (a) Fill in the blanks

- (i) — is the branch of biology deals with the study of cell.
- (ii) The individual result from in breeding is called as —.
- (iii) The queen and — involve in mating.
- (iv) Queen bee start laying eggs 2-4 — after mating. 2

(b) Chose correct alternative from the following :

(v) Mating process is usually successfull only..

- (i) 25 % (ii) 50 %
 (iii) 75 %, (iv) None of the given

(vi) Instrumental insemination done at —

- (i) Laboratory (ii) Yard
 (iii) Farm

(vii) Honey having more than...of water gets fermented during storage

- (i) 5% (ii) 10%
 (iii) 20% (iv) None

(viii) — is not a cell organelles.

- (i) Mitochondrion, (ii) Ribosome
 (iii) Microtubules (iv) Cytoplasmic vacuole 2

(c) Answer in **one** sentence.

(ix) Define bee breeding.

(x) What is Honey bee swarming ?

(xi) What is grafting in bee breeding ?

(xii) What is heterosis ? 4

2. Give an account of the following :—

- (a) Nucleus 4
 (b) Mitochondrion 4
 (c) Limitation of instrumental insemination 4

OR

- (d) Heterosis 4
 (e) Progeny testing methods 4
 (f) Examination of mating in apiary 4

3. Describe the following :—

- (g) General methods for selection. 4
 (h) Breeding apiaries. 4
 (I) Problems of bee breeding programme. 4

OR

- (j) General methods of selection. 4
 (k) Equipments for bee breeding. 4
 (l) Acquisition of colony from natural nest. 4

8. Explain the following :—

- (s) Equalization of colony strength. 4
- (t) Mating signs. 4
- (u) Mating yards. 4

OR

- (v) Transport of sealed queen cells. 4
- (w) Re-migration of stocks. 4
- (x) Single and multiple mating. 4



