

B.Sc. Part—II (Semester—IV) Examination

4S : APICULTURE

(Bee Chemistry)

Time : Three Hours]

[Maximum Marks : 80

Note :— ALL questions are compulsory. Questions 2 to 7 carry equal marks.

1. (A) Fill in the blanks :

- (1) Honey combs are made up of _____ ½
- (2) Honey produced from single floral nectar is called _____ honey. ½
- (3) Honey dew is secreted by _____. ½
- (4) _____ is main component of nectar. ½

(B) Choose correct option :

- (1) In honey processing plant, honey is heated by : ½
 - (a) direct heating
 - (b) indirect heating
 - (c) burning
 - (d) flash heating
- (2) Colour of wax is due to pigment of _____ ½
 - (a) honey
 - (b) pollen grain
 - (c) nectar
 - (d) propolis

- (3) Mature honey means : ½
- (a) ripened honey
- (b) unripened honey
- (c) raw honey
- (d) honey dew
- (4) For sealing of crevices and cracks of hive bee uses _____. ½
- (a) propolis
- (b) bee bread
- (c) wax
- (d) venom

(C) Answer in one sentence each :

- (1) What is long form of BIS ? 1
- (2) What is long form of HMF ? 1
- (3) What is honey dew ? 1
- (4) What is royal jelly ? 1
2. (a) Explain process involved in conversion of nectar to honey by bees. 4
- (b) Explain various bee products and give their use in bee colony. 4
- (c) Which raw material is required for preparation of honey and propolis ? Write its sources. 4

OR

- (d) Give chemical composition of nectar. 4
- (e) How will you identify mature and immature honey in honey comb ? 4
- (f) What is the difference between ripened and unripened honey ? 4
3. Give accounts of chemical composition of honey and its any three properties. 12

OR

What is honey ? Explain its types in detail. 12

4. (g) Explain hygroscopic property of honey. 4
 (h) Explain various climatic factors that affect on quality of honey. 4
 (i) Explain granulation of honey. 4

OR

- (j) Explain fermentation of honey. 4
 (k) Explain quality standards of honey. 4
 (l) Does the honey have antibacterial properties ? And why ? 4
 5. With the help of suitable diagram explain honey processing plant. 12

OR

What is the need of bees wax processing ? Discuss methods for its extraction and bleaching. 12

6. (m) Give chemical composition of bee pollen. 4
 (n) Explain medicinal use of bee venom. 4
 (o) With the help of diagram explain pollen trap. 4

OR

- (p) Give chemical composition of bee venom. 4
 (q) Explain use of bee pollen. 4
 (r) Explain method of collection of bee venom. 4
 7. (s) Explain use of royal jelly. 4
 (t) What is propolis ? Describe its commercial use. 4
 (u) Explain different commercial uses of royal jelly. 4

OR

- (v) What is royal jelly ? And how it can be preserved ? 4
 (w) Explain source and purpose of collection of propolis by bees. 4
 (x) Write chemical composition of royal jelly. 4

