



PPE – 321: Apiculture (0+1)



Give the Answers of following Questions:

- Q.1. When was modern beekeeping started in India?
- Q.2. What was the biggest discovery which resulted in the development of modern beekeeping?
- Q.3. What is principle of bee space?
- Q.4. In addition to providing honey, what are the other uses of honey bees?
- Q.5. Do we get honey from all the bee species?
- Q.6. Which are the wild honey bees and hive bees? How can you differentiate between the two types of bees on the basis of nesting site and comb structure?
- Q.7. What are the differences between a species and subspecies?
- Q.8. Which are the pollen bees?
- Q.9. Which is the exotic bee in India and when and where it was introduced successfully for the first time?
- Q.10. What is the difference in the quality of honey from wild bees and domesticated bees?
- Q.11. Which type of mouth parts are present in worker bees?
- Q.12. Where is royal jelly is produced?
- Q.13. Where are the wax glands situated in a worker bee?
- Q.14. In addition to locomotion, what are the other functions performed by different legs in honey bees?
- Q.15. Which organ has been modified in a worker bee into sting for defense purpose?

- Q.16. What is honey stomach?
- Q.17. What is propodeum?
- Q.18. Where are the pollen baskets present in a worker bee?
- Q.19. Which type of antenna is present in honey bees?
- Q.20. What is brood?
- Q.21. What is the normal structure of a honey bee colony?
- Q.22. At what age worker bees start secreting royal jelly?
- Q.23. What is the significance of spermatheca in a queen?
- Q.24. What is average life period of a worker, drone and queen bee?
- Q.25. What is the duration of development from egg to adult in case of a worker, drone and queen in *A. mellifera*?
- Q.26. How can we say that honey bees are social in nature?
- Q.27. Under what conditions a colony will have laying workers?
- Q.28. How can we say that honey bees are social in nature?
- Q.29. What is the significance of round and wag-tail dances in bee communication?
- Q.30. Who got noble prize for work on dances of honey bees?
- Q.31. How do the bees communicate distance and direction of food source from the hive?
- Q.32. What is trophallaxis?
- Q.33. How much temperature is maintained in a bee colony?
- Q.34. What is bee space and what is its significance?
- Q.35. What is the use of queen excluder?
- Q.36. Why smoker is used during handling of bee colonies?
- Q.37. What will you use to introduce a new queen in to a colony?
- Q.38. What is the standard frame size for rearing *A. mellifera* colonies ? As per BIS which

type of hive is used for rearing this bee species?

Q.39. How will you protect your face from honey bee stings?

Q.40. What is the principle on the basis of which honey extractor extracts honey from the combs?

Q.41. Why should we not wear dark clothing when examining a bee colony?

Q.42. What is the key to success in bee keeping?

Q.43. For what purpose colony examination is required?

Q.44. What to do if a bee stings during colony examination?

Q.45. What is the food of honey bees?

Q.46. What is a honey flow source?

Q.47. Which are the important autumn honey flow sources in Himachal Pradesh?

Q.48. What is build-up flora?

Q.49. In early spring when should the winter packing be removed?

Q.50. In the first examination after winter, what management practices are required?

Q.51. What is stimulatory sugar feeding?

Q.52. What is spring dwindling?

Q.53. What causes swarming in bee colonies?

Q.54. How can you manage the colonies to prevent swarming?

Q.55. How to know that the bee colony is preparing for swarming?

Q.56. What is supersedure?

Q.57. Enlist the problems colonies face during summer dearth period

Q.58. Why a new queen with laying capacity can not be produced during monsoon?

Q.59. How can you differentiate between the colonies preparing to swarm from those preparing to supersede old queen?

- Q.60. How do the bees maintain hive temperature during summer? How can bees be assisted in maintenance of hive temperature?
- Q.61. Which type of sugar feeding is given to the bee colonies during autumn and why?
- Q.62. Why commercial beekeepers go for migratory beekeeping?
- Q.63. What are four fundamental principles for successful overwintering of honey bee colonies?
- Q.64. How can you protect colonies from winter?
- Q.65. How do the bees maintain hive temperature during winter?
- Q.66. What precautions should be taken before migrating the bee colonies?
- Q.67. Under what conditions colonies require uniting of bees?
- Q.68. Which type of feeding is given to the colonies for their winter stores?
- Q.69. When should a queen be replaced?
- Q.70. How will you introduce a new queen in a colony?
- Q.71. How will you identify robbing bees?
- Q.72. How can the absconding colonies be differentiated from colonies which are swarming?
- Q.73. Under natural conditions when are the queens raised by the bee colonies?
- Q.74. What are the qualities of a good queen?
- Q.75. Which type of supplementary feedings are required by bee colonies during different periods?
- Q.76. What is difference between pollen substitute and pollen supplement?
- Q.77. What is the use of queen excluder in quality honey production?
- Q.78. Why should the old combs be replaced by new combs?
- Q.79. What are the causes of bee poisoning?
- Q.80. How can you prevent bee poisoning?

- Q.81. What is the necessity of selective breeding of bee colonies?
- Q.82. What is meant by bee forage management?
- Q.83. What are the benefits of migratory beekeeping?
- Q.84. What prevents raising of new queen cells in a normal colony?
- Q.85. Under what conditions queen cells are raised naturally by a colony?
- Q.86. What is difference between cell builder and breeder colonies?
- Q.87. What is the function of queen cell protector?
- Q.88. What should be the dimensions of queen cells to be used for grafting of larvae for mass rearing of queens in *A. mellifera*?
- Q.89. What should be the age of larvae used for grafting in the queen cells?
- Q.90. At what age queen goes for mating flight?
- Q.91. How can you differentiate between attack of *Vespa auraria* and *V. magnifica* in an apiary?
- Q.92. What are the symptoms of attack of wax moth?
- Q.93. How will you check level of infestation of varroa mite in a colony?
- Q.94. How can the attack of wax moth be checked?
- Q.95. How will you manage attack of predatory wasps in an apiary?
- Q.96. What are the differences between European foul brood and American foul brood diseases of honey bees?
- Q.97. What are the symptoms of Nosema disease? How can you control it?
- Q.98. What causes acarine disease? How can you detect it?
- Q.99. What are the symptoms of sac brood disease of honey bees? What preventive measures can be taken to check this bee disease?
- Q.100. Which are the main brood diseases of honey bees?
- Q.101. Which are the main adult diseases of honey bees?