

CODE _____ TIME _____

EAS MASTER BEEKEEPER LAB EXAM 2016 NEW JERSEY

*THE EAS Lab Exam contains 24 STATIONS each with one or more items. There are 2 to 5 questions related to the items at each station each worth 1 point. Total exam value = 100 pts. Passing Grade=85 points. Read the questions carefully. Do NOT assume anything and answer the question as it is asked. You may touch, pick up and closely examine each of the items – do not MOVE any labels or move any item to a different station. **If unclear, ASK for clarification.***

STATION 1. There are 2 photos showing chemical treatment for varroa mites. Answer these 5 questions with reference to ONLY ONE of the photos. I am using PHOTO A or B

1. What is the name of chemical being used? A=Apivar B=formic acid
2. Does this treatment benefit from reduction/closing of hive entrances? YES or NO
3. (2 pts) If this treatment is used when bees are storing honey what might be an unintended consequence? A=contamination B= none can be used w supers
4. (2 pts) How long is this treatment period? A=42-56 days B= 7 days

A=apivar B=MAQS

STATION 2. There is a frame before you. Using the indicated markers answer 3 questions .

5. What specifically is indicated at Marker 2 A? capped worker cell
6. (2 pts) What specifically is at Marker 2 B? Queen cup
7. (2 pts) Is this a wired frame? Duragilt

Brood frame from colony

STATION 3. Before you are some tools we frequently use to inspect a bee colony

8. What is missing but needed for proper use of some of these tools? matches to light smoker fuel
9. What would tool 3B be specifically used for in the opened colony? free frames of propolis
10. (2pts) ID two of these items which might not be necessary as it duplicates the same manipulation objective as another? frame grip and hive tool + smoker & sprayer + spacer& hive tool

smoker =2A, hive tool=2B, frame spacer=2C, frame grip=2D,smoker fuel=2E,spray bottle=2F

STATION 4. There are four PLASTIC items before you. Answer the questions posed for each. Be sure you use correct item for each set of questions

11. ITEM 4 A What is item 4 A? grid to collect propolis
12. ITEM 4 B (2 pts) Describe specifically where item 4B is used in hive? top brood below super
13. ITEM 4 C. What is item 4C? bee escape
14. ITEM 4 D. (2 pts) What is item 4D pollen trap and where (specifically) is it used with a bee hive) in front of single entry/exit

Plastic propolis trap (=4A), Plastic queen excluder (=4B), plastic bee escape (=4C), plastic pollen trap (=4D)

STATION 5. There are three MORE PLASTIC items before you. Answer the appropriate question for each of the 3.

15. ITEM 5A What is item 5A? JZBZ queen introduction cage
16. ITEM 5B (2 pts) Where in hive below supers and for what reason remove capped honey to harvest is item 5B useful?
17. ITEM 4C. What is item 5C? SHB trap

5A= JZBZ queen cage 5B= Plastic bee escape 5C= Plastic SHB trap

STATION 6. There are four feeders before you.

18. Identify as specifically as possible Feeder 6A Division Board feeder
19. (2pts) Feeder 6B would be the least desirable choice for fall feeding of 2:1 syrup - give 2 reasons why. robbing & cold temps
20. Which of 3 feeders would you want to have a working smoker available to replenish feeder when emptied? Division board

6A= Division board feeder 6B= Boardman entrance feeder 6C= Plastic top pail feeder

STATION 7. There is an anatomically incorrect "bee" here.

21. What is item 7 A on model? thorax
22. If anatomically correct, what would be visible between Item 7A and 7B on the model? wasp waist
23. (2 pts). If this "bee" was anatomically correct how many leg segments would we be able to see? 5 and what 2 things might we see terminating last segment of leg? 1 claw 2 arolum pad

Bee toy

STATION 8. There is a photo of a “bee”.

24. (2 pts) Is this a photo of a honey bee and ‘spring yellow’ flower? Give two reasons why you “know” this is a Honey bee. 1. hair in eyes 2. pollen basket
25. At time of photo what was bee doing? probing for nectar

STATION 9. Before you is a frame removed this morning from a bee colony.

26. (2 pts) What is brood stage & probable age of brood in cell at marker 9A? larva/2-3 day
27. What is specific item at marker 9B? EFB disease brood
28. (2pts) Why would this be an appropriate frame to remove if you needed to reduce the size of the colony by make a split for swarm control? open brood start new col/not affect surplus but disease present

STATION 10. Before you are parts of a wooden frame needing assembly, with some marker labels.

29. What are the projections on Part 10A termed? (shoulders on end bar)
30. Why are there holes drilled in Part 10B? for eyelets
31. What is the SPECIFIC, COMPLETE name of part 10C? wedge top bar
- 32.(2 pts) Beside nails and hammer name two useful items/tool(s) needed to assemble this frame? 1. _____ 2. Glue, frame assembly gig, pliers

STATION 11. There is a hive before you. Warre Hive

33. Is this a Langstroth, Kenya, Tanzania, **Warré**, Feral or Long hive? CIRCLE ONE
34. Are the worker cells in the combs of this hive likely to be BIGGER, the SAME or **SMALLER** size (CIRCLE ONE) compared to cells started from a sheet of commercial foundation?
- 35.(2pts) IS this or IS IT NOT an appropriate bee hive for individuals who live in a city and start bees because they heard bees are dying and they want to save them? Why?
answer

STATION 12. Bee antibiotics and mite chemicals are shown at this stop.

- 36. Remembering the label is the law – which of these materials is illegal? _____ oxalic/pdb
- 37. Which one(s) is a legal application for an active brood disease infestation? __ tylan ____
- 38. Which one(s) are permitted for organic honey production? _ Apilife Var, Apiguard _____
- 39. (2 pts) What material would you advise a new (1st year) beekeeper avoid using? _____
Why? _____ any depends upon reason

12A=apivar, 12B=apiLifeVar, 12C= fumigillan, 12D= tylan 12E= (illegal OXALIC or PDB) 12F= Apiguard

STATION 13. This station has a Langstroth hive box with frames

- 40. What is name for item 13A? _____ rabbet
- 41. What is name of frame 13B _ Hoffman _____ and what type of foundation was used in frame? _ Duracomb _____
- 42. Does frame 13C have drone cells? _ Yes _____

STATION 14. Insects

- 43. (2 pts) Is there a pest of honey bees here? YES or NO ? If Yes which one(s)? _ wax moth , yellow jackets, European hornet _____
- 44. If Insect 14B was around your bee hives what would you use to reduce its impact on the colony, if anything? __ trap _____
- 45. Name insect 14C? _ drone (flower fly) _____

insects A= wax moth, B=YELLOW jackets, C=flower (drone) flies, D=polistes wasps E=beetles, F= ground bee G=???

STATION 15. Hive products

- 48. How would individuals use product 15A? __ propolis – internally or externally _____
- 49. Would a honey show include as one single judging category Items 15B and 15C? YES or NO.
- 50. What products are obtained from a glandular section of worker honey bees? _ wax, rj ____ _
- 51. Is the product 15E likely contain more than honey? YES or NO. If yes, What? sugar + propolis

products A=propolis B= wax candles, C=piece of wax, D= royal jelly, E= cough drops F= honey

STATION 16. Before you are some specialty items used to accomplish a beekeeping task

50. What is the collective purpose of these items? raise/graft queens
51. Where is specific use of item 16B? protect capped queen cell
52. (2pts) Identify the colored items of 16D? plastic cups. Of the other items at this station, what other item is used in closest conjunction with item? 15B
53. 2 pts) What is item 16F? marking pen Of the other items here, which would it be most directly be used with? 16G

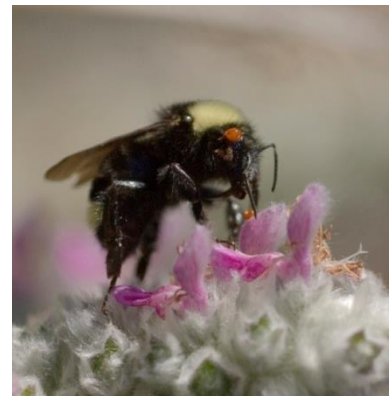
queen stuff a= queen cell protective cage, B=3 grafting needles, c=marking pen, d= plastic and natural queen cups,e= introducing cages, f=queen marking device g=queen catcher

STATION 17. Before you is a collection of several items we might use in beekeeping

54. (2pts) What is Item 16A? cappings scratcher. What task specifically does 16A accomplish? open capped honey cells/sample drone brood for mites
55. What is item 16B? frame cleaner. Under what circumstances would we use 80B
56. What is name for 16C? bracket to fix top bars

STATION 18. 2 Photos of bee pests

57. Photo 17A (of about 1000X magnification) show tracheal tube in an unhe thorax. What is the green item likely to be? tracheal mite
58. (2 pts) What is this bee called in Photo B ? bumble bee What is likely light tan colored item on it's head? mite



Station 19. 2 Photos of bee hive activities

59. What is beekeeper doing in Photo 18A? feeding sugar syrup
60. What is likely happening in Photo 18B? making nucs

STATION 20. Before you is a life cycle diagram produced by EAS MB Jon Zawislak **SHB LC**

- 61. In Life Cycle 20A, insert A shows the adult life stage of SHB -
- 62. What are the adults doing in Insert B? hiding in hive
- 63. (2 pts) In insert 20C, a different life stage is shown exiting the bee hive. What is life stage name _____ and how many days does this life stage exist in a bee hive before they exit it? larva, 7-10 days or 10-16 days

Station 21. Another life cycle diagram produced by EAS MB Jon Zawislak **Varroa LC**

- 64. In life cycle what is happening in insert 21A? adult mite hiding in cell
- 65. In Life Cycle, name a chemical treatment that might be capable of killing the mites show in insert 21B MAQS (formic acid) penetrates capped cell
- 66. (2pts) What is the usual reproductive success at Insert 21C? 1 mature daughterly control

Station 22. Items used for mite sampling **PS sampling jar/white plate**

- 67. What is white material? powdered sugar
- 68. What is significance of black mark on jar? = 300 bee sample
- 69. What is item 22A used for? Shake PS and mites onto

2 questions from very first MB exam 1981 (35 years ago)

STATION 23.

- 70. What is the full name of the object before you? Benton mailing cage
- 71. Within 10 years, when was it invented? 1891

STATION 24. You have before you three pieces of foundation numbered 1 through 3. What is the name of each? Under what circumstances would each be used?

- | Name | circumstances of use |
|----------------------------------|---|
| 72. <u>drone cell foundation</u> | <u>raise drones for drone trap</u> |
| 73. <u>small cell foundation</u> | <u>small cells for mite control – not effective</u> |
| 74. <u>wired foundation</u> | <u>for brood</u> |

thin surplus, medium brood unwired, wired drone foundation