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_arolium 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= fumigllan, 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 unhealthy thorax. What is the green item likely to be? ___________ tracheal mite

58. (2 pts) What is this bee called in Photo B ? __________ What is likely light tan colored item on it’s head? __________ bumble bee/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?

<table>
<thead>
<tr>
<th>Name</th>
<th>circumstances of use</th>
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<tbody>
<tr>
<td>72. drone cell foundation</td>
<td>_____ raise drones for drone trap__________</td>
</tr>
<tr>
<td>73. small cell foundation</td>
<td>_____ small cells for mite control – not effective</td>
</tr>
<tr>
<td>74. wired foundation</td>
<td>_____ for brood __________________________</td>
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thin surplus, medium brood unwired, wired drone foundation