EAS Master Beekeeper Lab Exam 2022		
	tations each with one or more items. There are 2-5 questions per Total exam value = 100 pts. Passing grade = 85 points. <b>Read the</b>	
STATION 1. Here before you are	6 mystery items. Please identify the object (1 point each).	
1a	corbicula	
1b		
1c		
1d		
1e	antenna cleaner	
1f	Sting with poison sac	
Station 2. Name each pathogen	/parasite (1 point each).	
2a	American Foulbrood	
2b	Wax moth adult	
2c	European Foulbrood	
2d	Varroa mites	
2e	Small Hive Beetle adult	
Station 3. What is the name and	I purpose of each tool (2 points each)	
3a	propolis trap	
	trapping propolis	
3b	decapper scratcher	
	removing wax caps	
3c	frame scraper	

\_\_\_\_\_scraping out frame grooves

\_\_\_\_\_trap small hive beetles

3d.\_\_\_\_\_\_beetle blaster

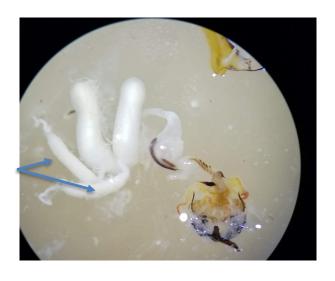
Name\_\_\_\_KEY\_\_\_\_

4a	drone frame
4b	
4c	polariscope
	to detect imperfections or particles in honey
4d	wiring tool
	for wiring frames
4e	varroa sampler
	varroa alcohol wash
4f	
	grafting
Station 5. Identify the object and answer assoc	
5a	queen cage frame
How could you use it? Caging queen to lay?	
5b	flow hive frame
When would one use this toolhive	for honey in a flow
5c	propolis
How is this used in the hive?	
	vaporizer
When would one use this piece of equipmentfumigate varroa mites	used to
5e. What is this object?pen	When and how would one use it? ep
Station 6. Honey bees and their relatives (2 poi	nts each)
6a. Name the insect that makes this nestmud	•

What do they eat? spiders
6b. What is this insect? _Spotted Lantern Fly
What is its possible influence on beekeeping?They produce honey dew which is a sweet sugar fluid that many insects collect including honey bees
6c. What insect is this? hover fly
What ecosystem service does it provide?_Pollination
6d. What insect is this?_sweat bee
Where would you find their nest?In the ground

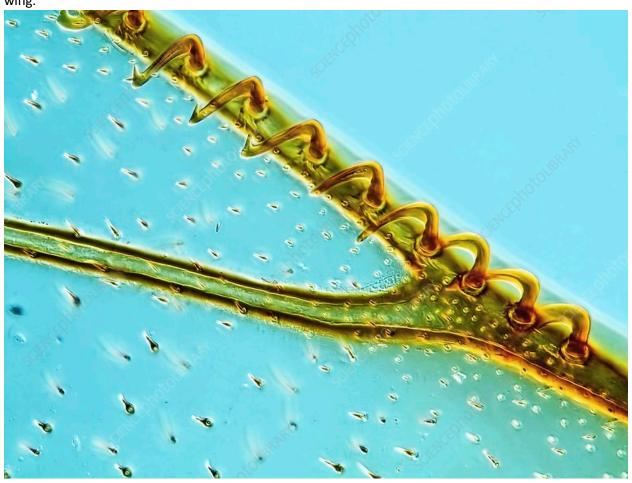
Station 7. Identify the structure in the picture and answer the associated question(s). (2pts)

7a. What structures are the arrows pointing to and what do they hold? Seminal vesicles and they hold sperm



7b. What is this a picture of, specifically the hooks? What are the hooks used for? Hamuli. Hamuli help to increase the surface area of the wing by coupling the front and hind

wing.



7c. What is this picture showing on the underside of this honey bee abdomen? How old is this

bee? Wax scales worker who is days old.



on the under side of a between 12 and 18

## Station 8. Pests and pest management

8a. What does an alcohol wash measure? How would you measure the reproductive rate of mites?

(4 pts) Alcohol wash measures the amount of mites on a sample of adult bees at that particular moment in the colony. To measure reproductive rates of mites one would have to uncap purple eyed pupae and count the number of adult females, deutonymphs and protonymphs. The more cells uncapped the better idea of reproductive rate. Taking these measures over time also gives you a better understanding of the reproductive rate.

8b. Name two products currently registered for Varroa management that cannot be used during a nectar flow name the active ingredient in each (6pt) Apivar- Amitraz, oxalic acid

8c. What is this pathogen? How does it affect a colony. DWV

8d. What is this disease called? Where would you find evidence of this disease? chalkbrood

8e. Prior to 2016 beekeepers could readily get antibiotics to treat bacterial pathogens in their colonies. What changed in 2016 and what brought about this change? A beekeeper must get a prescription from a vet for antibiotics. This was put in place because of the overuse of the antibiotics and the development of resistant bacterial strains.

8f. AFB photo

## Station 9. Foraging behavior and honey (3 pts each)

9a. Name two plants that produce nectar that is toxic if ingested by humans. Mountain Laurel Rhododendron

9b. What is honeydew? Is the excretia from phloem feeding insects such as aphids, Spotted Lantern flys ect...

2.net weight 3.contact information
Station 10. Flower biology (5pts)
10a.What is the difference between a pollinator and a flower visitor?
Pollinator moves pollen from the anther to a stigma. A flower visitor just visits the flower and may never come in contact with pollen or touch a stigma.
10b.Describe three characteristics of flowers that attract visitors.
Scent, color, shape
Station 11. Genetics
11a. What are two ways to conduct controlled mating's with honey bees (specific male and female mating)  Artificial insemination

9c. What three things are required on a honey label? (3pts)

1.common name of product

Drone flooding

Quarantined or remote mating area

11b. How many chromosomes do drones have? How many do workers have?
Drones have 16, workers have 32
11c. Why are inbred lines difficult to maintain?
Because you lose diversity selecting for specific traits which makes the organism more vulnerable to pests and pathogens and less adaptable to any changes in the environment.
Extra Credit:
What is a gynandromorph?
Sexual mosaics, a mix of male and female