



Stage 5 Agricultural Technology

Name:

Year 9 topic test: Worms

Questions 1–20 are multiple choice. Circle the most correct answer.

1. Which of the following lists are ALL foods that worms enjoy:
 - a) onion peels, vegetable scraps, chook pellets, animal manure, grass clippings
 - b) chook pellets, animal manure, grapefruit peel, vegetable scraps
 - c) animal manure, grass clippings, plastic bags, vegetable scraps, chook pellets
 - d) vegetable scraps, chook pellets, animal manure, grass clippings.
2. Dessication means:
 - a) absorbing water
 - b) drying out
 - c) to turn yellow
 - d) doubling in size.
3. What can be added to a heavy clay soil to make it more suitable for worms?
 - a) coarse sand
 - b) gypsum
 - c) organic matter
 - d) all of the above.
4. What is the main benefit of organic mulches in hot weather?
 - a) help keep the soil cool
 - b) help retain soil moisture
 - c) both a and b
 - d) stop air getting into the soil.

5. What is the ideal pH range for worms?
 - a) 5–7.4
 - b) 9.2–13
 - c) 1.5–3.5
 - d) 3.5–5.

6. Fertilisers that will ALL cause the soil to acidify over time include:
 - a) phosphate, urea, organic manure
 - b) ammonium sulfate, urea, phosphate
 - c) urea, nitrate, worm juice
 - d) thrive, ammonium sulfate, urea.

7. Three ways to increase worm numbers include:
 - a) add a heap of urea, give them a lot of manure, keep the moisture level correct
 - b) plenty of high quality food, keep the moisture level correct, provide the right temperature
 - c) provide the right temperature, keep a bright light on all the time, plenty of high quality food
 - d) keep the moisture level correct, provide the right temperature, cover tightly with black plastic.

8. If you had no worms in your garden, where would be the best spot to get some?
 - a) from a worm farm in Queensland
 - b) from the next door neighbour's garden
 - c) from a worm farm in Africa
 - d) from your mate's place out of town.



9. Essential characteristics of bedding material are:
 - a) becoming water-logged and excluding air
 - b) well aerated and highly acidic
 - c) well drained and aerated
 - d) highly alkaline and well aerated.

10. You know your bedding has the correct amount of moisture in it when you can:
 - a) just squeeze a few drops of water out of a handful of it
 - b) squeeze a heap of water out of it
 - c) see it on the surface of the pile
 - d) not squeeze out any water at all.

11. Why do worms need some grit in their diets?
 - a) for their stomach acids to break it down
 - b) for their gizzard to grind their food into a paste
 - c) so they don't get constipated
 - d) to add nutrients to their diet.

12. Two substances that can be added to provide grit include:
 - a) pumpkin and eggshells
 - b) ground limestone and potato
 - c) sand and ground pepper
 - d) ground limestone and egg shells.

13. In any system, a process is:
 - a) when the inputs are converted to outputs
 - b) the things added to a system
 - c) the products produced from a system
 - d) the feedback given to the farmer.

14. Sustainability can best be described as:
 - a) the process whereby the farmer destroys the farm's environmental resources while maximising profitability
 - b) the immediate surroundings of an organism
 - c) the ability of a farm to conserve its environmental resources for future generations while maintaining profitability for the farmer
 - d) the relationship between an interacting community of organisms and their physical environment.
15. What should you do to poultry pellets before adding them to your bed of worms?
 - a) cook them
 - b) grind them up
 - c) wet them
 - d) add urea to them.
16. If your worm bed has a pleasant earthy smell, what does this mean?
 - a) it is not very efficient
 - b) it is not well managed
 - c) it is using a good deodorant
 - d) it is well managed.
17. Earthworms are hermaphrodites. What does this mean?
 - a) they can mate with themselves
 - b) they need a partner to mate
 - c) they need two males to mate successfully
 - d) they need two females to mate successfully.
18. How do worms breathe?
 - a) with lungs
 - b) by diffusion through their skin
 - c) with gills
 - d) by diffusion through their anus.



19. The following are all breeds of worms:
- a) Indian blue, tiger, Angus
 - b) Merino, African night crawler, red
 - c) Australorp, African night crawler, tiger
 - d) Grey, red, Indian blue.
20. What shape, colour and size are worm eggs (capsules)?
- a) tear drop, black, 5–6 mm
 - b) tear drop, creamy, 2–3 mm
 - c) round, creamy, 0.5–1 mm
 - d) tear drop, creamy, 2–3 cm.

Questions 21–30 are true or false. Answer T or F.

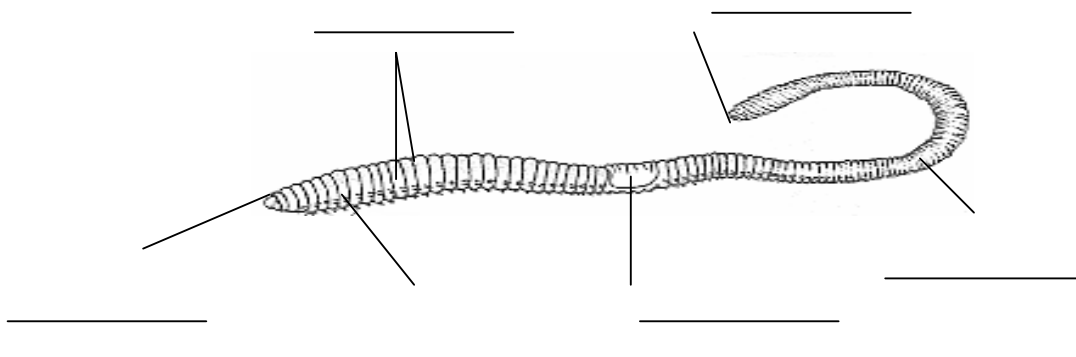
21. The following materials can all be used for bedding:
manure, grass clippings, shredded paper and peat moss. _____
22. Worms eat their own weight in food every day. _____
23. The dry body weight of a worm is 1/3 protein. _____
24. Up to 70% of all household waste is edible by worms. _____
25. There are around 270 species native to Australia. _____
26. If you cut a worm in half, you get 2 worms. _____
27. Worms get diseases too. _____
28. Worms mate only with worms of their own species. _____
29. Under ideal conditions, one mature worm can produce
up to 3 500 young in a year. _____
30. Worms have been around for 600 million years. _____

Questions 31–40 are short response answers. Answer in the spaces provided.

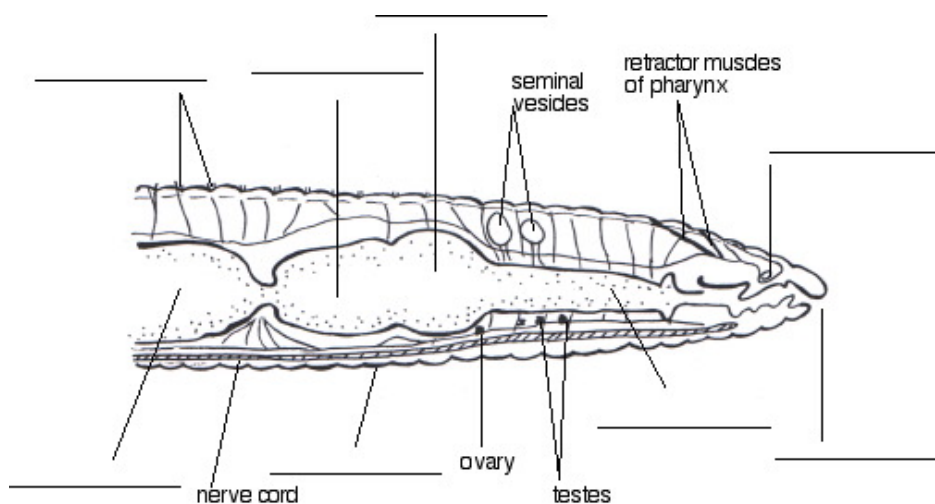
31. Give two reasons why worms prefer to eat underground.

32. Give two reasons why worms dislike cultivation of their soil.

33. Label the diagram of the external and internal structure of a worm below.



External structure of a worm



Internal structure of a worm

34. Complete the table below showing the functions of the digestive system of a worm.

Part	Function
Mouth	
Pharynx	
Oesophagus	
Crop	
Gizzard	
Intestines	
Anus	

35. If you wanted to produce vermicompost, how would you do this?

36. Describe two ways to harvest worms from the vermicompost.



37. Draw a systems diagram illustrating the interaction between the soil (worms and micro-organisms), plants, animals and climate.

38. Discuss five ways worms benefit the soil by their presence.

a)

b)

c)

d)

e)



39. From the excursion to Beaulieu Rum and Black Magic list:

a) The types of worm products they produce.

Beaulieu Rum

Black Magic

b) The different markets they target.

Beaulieu Rum

Black Magic

40. Consumers are more aware of environmental issues and ways to conserve resources. You are a consumer, after completing this topic, state the role worms play in environmental issues and ways to conserve resources.

THE END

