**Practice Exam 3**

1. Leeches reproduce in all these ways EXCEPT
2. asexually.
3. sexually.
4. mutual sperm transfer.
5. cocoon production.
6. The leech \_\_\_\_\_\_\_, a structure shared with oligochaetes, is part of the evidence that leeches evolved from oligochaetes.
7. suckers
8. annulus
9. clitellum
10. parapodium
11. annulus
12. You are a scientist on a research vessel in the Gulf of Mexico. You collect an undescribed species of animal in a plankton net. The animal has the following obvious characteristics: teardrop-shaped, contains a thin, almost transparent exoskeleton, and two pair of antennae. This animal is probably a
13. copepod.
14. barnacle.
15. tube worm.
16. horseshoe crab.
17. sea spider,
18. Which of the following are characteristics of both hemocyanin and hemoglobin?
19. occur in nematodes
20. red in color
21. contain e element iron
22. transport oxygen (O2)
23. blue in color
24. Which feature of arthropods probably preadapted them to diversify onto land in the early Paleozoic?
25. exoskeleton
26. paired appendages
27. walking legs
28. antennae
29. While working in your garden, you uncover an animal with many legs, mostly as two pair per segment. It is eating decaying leaves and other plant material. This animal is probably a  
    A) caterpillar.  
    B) millipede.  
    C) centipede.  
    D) polychaete worm  
    E) earthworm
30. Which of the following insects displays complete metamorphosis?  
    A) grasshoppers  
    B) mayflies  
    C) caddisflies  
    D) silverfish  
    E) all of the above
31. Clams and lobsters both have exoskeletons, but lobsters have much greater mobility. Why?
32. The lobster skeleton can actively contract, while the clam skeleton lacks this ability.
33. Clams only have adductor muscles that hold the shell closed, but lobsters have both abductor and adductor muscles.
34. Lobsters have a jointed exoskeleton, allowing for the flexible movement of appendages and body parts at the joints.
35. Clams can only grow by adding to the outer edge of the shell, while lobsters molt and replace their exoskeleton with a larger, more flexible one.
36. Which of the following is NOT true of the chelicerates?
37. Their body is divided into a cephalothorax (prosoma) and an abdomen (opistosoma).
38. include ticks, mites, scorpions, and spiders
39. The horseshoe crab is one surviving marine member.
40. Their 1st pair of appendages are modified as pinchers or fangs.
41. They have antennae.
42. Organisms in which a circulating body fluid is distinct from the fluid that directly surrounds the body's cells are likely to have
43. a gastrovascular cavity.
44. an open circulatory system.
45. a closed circulatory system.
46. gills.
47. “If all the matter in the universe except the \_\_\_\_\_\_\_\_ were swept away, our world would still be dimly recognizable, and if, as disembodied spirits, we could then investigate it, we should find its mountains, hills, valleys, rivers, lakes, and oceans represented by a film of \_\_\_\_\_\_\_\_ . The location of towns would be decipherable, since for every massing of human beings there would be a corresponding massing of certain \_\_\_\_\_\_\_\_ . Trees would still stand in ghostly rows representing our streets and highways. The location of the various plants and animals would still be decipherable, and, had we sufficient knowledge, in many cases even their species could be determined by an examination of their \_\_\_\_\_\_\_\_ parasites.” The missing term in this passage is
48. annelids
49. echinoderms
50. bryozoans
51. nematodes
52. Nematode parasites live in or on
53. plants.
54. animals.
55. both of these
56. neither of these
57. The lifecycle of *Ascaris* *lumbricoides*
58. **\***is direct.
59. requires one intermediate host.
60. Includes a heart/lung migration.
61. Both A and B
62. Both A and C

**\***A direct lifecycle is a parasitic lifecycle in which the parasite is transmitted directly from host to host without an intermediate host or vector

1. Which of the following is NOT a nematode?
2. pinworms
3. Guinea worms
4. *Schistosoma*
5. Hookworms
6. *Trichinella spiralis*
7. A nematode is \_\_\_\_\_\_\_\_\_ (in terms of body cavity type)
8. eucoelomate
9. acoelomate
10. pseudocoelomate
11. none of the above
12. Nematodes lack \_\_\_\_\_\_\_\_ muscles and are therefore incapable of crawling as does an earthworm.
13. longitudinal
14. circular
15. oblique
16. Which of the following phyla is a member of the lophotrochozoa?
17. Annelida
18. Nematoda
19. Arthropoda
20. Echinodermata

1. What characteristics of the Nematode *Caenorhabditis elegans* make such an important model organism for the study of aging?

1. What is the function of setae.
2. What are some of the challenges parasites must overcome in order to complete their lifecycle?

Answers:

1. A
2. C
3. A
4. D
5. A
6. B
7. C
8. C
9. E
10. C
11. D
12. C
13. E
14. C (schistosomes are flukes)
15. C
16. B
17. A
18. They are eutelic (for an explanation of eutely, see Additional Reading)
19. Setae grip the soil when the animal is burrowing or crawling; they anchor the animal within its burrow
20. Finding the proper host; locating the specific site in the host; overcoming the host defenses; surviving between hosts