

Study questions - test I

evolution

history

- 1) The oldest written reference to evolution is attributed to whom?
- 2) Darwin did not discover “evolution”. Instead, he _____.
- 3) What were Lamarck’s ideas about evolution?

natural selection

- 4) How did Ernst Mayr summarize Darwin’s basic ideas?
- 5) T/F Selection causes new traits to appear in a population. (explain)
- 6) Why is the “ladder” model for thinking about evolution misleading and wrong?

trees

- 7) What is a monophyletic group?
- 8) What is a polyphyletic group?
- 9) What is a paraphyletic group?
- 10) Why do biologists want monophyletic groups?
- 11) Be sure to read the article “Understanding Evolutionary Trees”. **SUPER IMPORTANT**
- 12) Be sure you understand the idea that trees can pivot at any node.

species definitions

- 13) Explain the biological species concept. In what ways does this definition fall short?
- 14) Explain the phylogenetic species concept.

cladistics

- 15) Work on the practice trees. Make sure you can still construct a tree using the methods we worked on in class.
- 16) What is the idea of parsimony?

porifera

- 17) What is the syncytial ciliate hypothesis?
- 18) What does syncytial mean?
- 19) Which hypothesis concerning the origin of animals has the most support?

body types

- 20) What are the three body types found in sponges. How are they different from one another?
- 21) Which type of canal system is found in the largest of sponges?
- 22) How does water travel through the canal system?

cell types

- 23) What are archaeocytes? What do they do?
- 24) What are pinacocytes? What do they do?
- 25) What are choanocytes? What do they do?
- 26) How do sponges digest their food?

classes

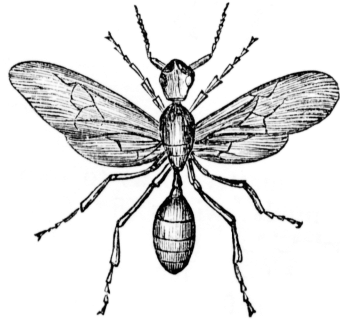
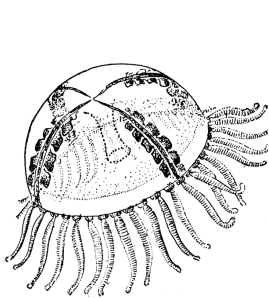
- 27) What are the three classes of sponges? Which body forms are found in each?
- 28) Which class are the freshwater sponges in?
- 29) How can the spicules tell you which class a sponge belongs to?

cnidaria

body arrangement

30)What is radial symmetry?

31)What types of symmetry are displayed below? label each.



anatomy

32)What type of gut is found in the cnidaria?

33)What are the three layers of the cnidarian body?

34)How do cnidocytes work?

35)What is a nematocyst?

36)How is the nervous system arranged in cnidarians?

body forms

37)Describe the two body forms found in cnidarians?

38)Which body form is better suited for sexual reproduction?

39)Describe the basic life cycle of cnidarians.

classes

40)Describe the classes of cnidarians.

41)What is strobilation?

42)What are rhopalia used for?

43)How is the rhopalium in box jellies different?

44)Describe two of the symbiotic relationships commonly found in the Anthozoa.

ctenophora

45)How are comb jellies different from true jellies?

46)What does the name “comb” jelly refer to?

47)How do ctenophora swim?

lophotrochozoa & ecdysozoa

48)Review characteristics and phyla in each group.

49)Review the basic tree from the website.

acoela

50)Define eucoelomate, pseudocoelomate, and acoelomate.

51)How are acoela different from platyhelminthes?

platyhelminthes

anatomy

- 52) What type of gut do flatworms possess?
- 53) What are rhabdites?
- 54) What is the tegument?
- 55) Describe a protonephridium, and how it works.
- 56) Where is the mouth located on a planaria?

classes

- 57) Describe the classes of flatworms that we discussed.
- 58) Describe the basic life cycle of a fluke.
- 59) Review the life cycles of various flukes discussed in the book.
- 60) How are monogenic flukes different from true flukes?
- 61) What characteristic do monogenic flukes share with tapeworms?
- 62) Describe the regions of the tapeworm body.
- 63) How is the scolex **not** the head of the tapeworm?
- 64) Review the tapeworm life cycles from the book.
- 65) How does one get infected with a tapeworm?
- 66) Know the parts of a mature proglottid.

nemertea

- 67) In what ways are nemerteans similar to flatworms?
- 68) In what ways are they different?
- 69) Describe how nemerteans feed.

gnathifera

- 70) What characteristic is thought to be shared by the members of the gnathifera?

gnathostomulida

- 71) Gnathostomulids get their name from what structure?

rotifera

anatomy

- 72) What is the corona?
- 73) How do rotifers break up food items?
- 74) What is the foot used for?
- 75) Why is the rotifer not considered to possess segmentation?
- 76) What is eutely?

myxis

- 77) How does reproduction work in the mictic rotifers?
- 78) Which class of rotifers utilizes myxis?

classes

- 79) Describe the classes of rotifers.

acanthocephala

- 80) What is the lifestyle of acanthocephala?
- 81) What does the name acanthocephala refer to?

cycliophora

82)Where do cycliophora live?

83)What is their life cycle like?

gastrotricha

84)What type of excretory organs are found in gastrotrichs?

85)In what ways are gastrotrichs similar to rotifers?

entoprocta & ectoprocta

86)Review the similarities and differences between these two groups?

87)What are bryozoans?

88)How do ectoprocta feed?

brachiopoda

89)How do brachiopoda feed?

90)How do brachiopods attach to a substrate?