

**ANSWER KEY**

1. monoecious (hermaphroditic)
2. Phylum Cnidaria
3. polyp
4. diffused nerve net and sensory cells (aggregated near mouth)
5. detect light (not image forming)
6. No
7. cilia & muscular contractions
8. organism 4 (frog neurula)
9. Platyhelminthes
10. pharynx (pharyngeal cavity from a planaria)
11. chloragogen tissue
- 12. glycogen storage and detoxification**
13. Annelida
14. spermatheca
15. other worm's sperm
16. (posterior) seminal vesicle
17. testes & sperm
18. epididymus
19. esophageal/calciferous glands
20. dorsal blood vessel
21. closed
22. ctenidia
23. filter feeding, gas exchange
24. open
25. yes (it is very reduced)
26. Phylum Mollusca, Class Bivalvia
27. locomotion (foot)
28. P. Echinodermata; water vascular system
29. coelomate
30. oral: cardiac stomach, aboral: pyloric stomach
31. Endoskeleton; calciferous plates
32. open
33. diffusion via dermal branchiae
34. madreporite → stone canal → ring canal → radial canal → lateral canal → ampulla & tubefeet
35. hepatic caeca; **digestion and storage**
36. dioecious
37. male
38. gastric mill; grinding food
- 39. gizzard**
40. green gland; getting ride of nitrogenous waste
41. kidney
42. a. open  
b. heart → arteries → tissue sinuses (-O<sub>2</sub>) → central sinus → channels within the GILLS (+O<sub>2</sub>) → pericardial sinus → heart  
c. hemocyanin
43. gastric mill
44. green gland
45. male
- 46. tubules of accessory gland; yes (different shapes)**
47. open; there is no respiratory pigment present
48. spiracles → trachea → tracheoles
49. a. hemimetabolous  
b. mosquito, fly  
c. grasshopper
50. P. Arthropoda;  
1) chitinous exoskeleton, 2) jointed appendages, 3) cephalization
51. fat; protection and storage

52. nephridia
53. **mouth → esophagus → stomach → small intestine (duodenum, jejunum, ileum) → large intestine (caecum, colon) → rectum → anus**
54. ureter
55. abdominal and thoracic cavities
56. E = clavicle  
P = tibia
57. **right atrium → tricuspid → right ventricle → pulmonary semilunar valve → pulmonary arteries → lungs → pulmonary veins → left atrium → bicuspid → left ventricle → aortic semilunar valve → aorta → all parts of the body → inferior, superior vena cava → right atrium**
58. gall bladder; bile
59. submaxillary gland
60. The lymph nodes are part of the lymphatic or immune system; they filter lymph or the body's fluids.
61. parotid gland (the lacrymal gland is not a salivary gland)
62. (15): female  
(16): male
63. vagina
64. mature follicles
65. scrotum
66. seminiferous tubules
67. sperm are produced in seminiferous tubules and mature sperm are stored in the epididymis
68. M = uterine horn (or uterus)  
E = spleen  
O = bladder  
W = seminal vesicles
69. (earliest) 18 → 17 → 20 → 19 (oldest)
70. holometabolous
71. protostome
72. interstitial cells
73. testosterone
74. **Mitosis**
75. Male Rat
76. Deuterostome
77. epididymis; maturation of sperm
78. yay. sorry it took me awhile to find it in lab.
79. corpus luteum; estrogen and progesterone
80. (earliest) ovum(25) → 8 cell stage (28) → blastula (24) → gastrula (27) → neurula (26) (latest)
81. anus
82. notochord
83. placenta
84. maternal and embryonic
85. nourish the developing embryo
86. yolk sac
87. **rats can give birth to multiple young at one time.**
88. a tiny zebra fish (the key idea to remember is that birds and other animals need big eggs because they don't have the placental stage to feed the growing embryo).
89. B
90. C
91. This traps more dead air under their feathers which creates insulation (warmth).
92. increased strength and weight reduction, which are a feature that helps flying
93. Convergent
94. depends on what is in the tank on test day, but here are some examples:  
  
deuterostome: starfish (P. Echinodermata)  
protostome: a feather duster (P. Annelida)
95. Kingdom Animalia (just for fun =) ).