# Entomology Test Answer Key

## Section 1: Identification

### Part 1: Distinguishing Between Tricky Taxons

1. Diplura
2. Protura
3. Anoplura
4. Mallophaga
5. Mallophaga
6. Mallophaga
7. Corixidae
8. Notonectidae
9. Notonectidae
10. Corixidae
11. Notonectidae
12. Nepidae
13. Nepidae
14. Belostomatidae
15. Nepidae
16. Miridae
17. Lygaeidae
18. Coreidae
19. Miridae
20. Coreidae
21. Cercopidae
22. Cicadellidae
23. Cercopidae
24. Cercopidae
25. Lestidae
26. Lestidae
27. Coenagrionidae
28. Lestidae
29. Coenagrionidae
30. Gomphidae
31. Gomphidae
32. Libellulidae
33. Aeschnidae
34. Aeschnidae
35. Libellulidae
36. Gomphidae
37. Gryllidae
38. Gryllacrididae
39. Gryllacrididae
40. Gryllidae
41. Gryllacrididae
42. Culicidae
43. Culicidae
44. Chironomidae
45. Chironomidae
46. Culicidae
47. Syrphidae
48. Syrphidae
49. Bombyliidae
50. Syrphidae
51. Bombyliidae
52. Calliphoridae
53. Tachinidae
54. Calliphoridae
55. Tachinidae
56. Muscidae
57. Muscidae
58. Tachinidae
59. Calliphoridae
60. Asilidae
61. Stratiomyidae
62. Asilidae
63. Asilidae
64. Stratiomyidae
65. Stratiomyidae
66. Tephritidae
67. Drosophilidae
68. Drosophilidae
69. Tephritidae
70. Drosophilidae
71. Colletidae
72. Megachilidae
73. Apidae
74. Halictidae
75. Apidae
76. Colletidae

77. Halictidae
78. Megachilidae
79. Apidae
80. Apidae
81. Tenthredinidae
82. Siricidae
83. Siriciade
84. Tenthredinidae
85. Tenthredinidae
86. Lycaenidae
87. Nymphalidae
88. Lycaenidae
89. Lycaenidae
90. Nymphalidae
91. Noctuidae
92. Lymantriidae
93. Noctuidae
94. Lymantriidae
95. Lymantriidae
96. Noctuidae
97. Dystiscidae
98. Gyrinidae
99. Hydrophilidae
100. Histeridae
101. Gyrinidae
102. Dytiscidae
103. Histeridae
104. Gyrinidae
105. Lamphyridae
106. Cantharidae
107. Cantharidae
108. Lamphyridae
109. Lamphyridae
110. Cantharidae
111. Chrysomelidae
112. Coccinellidae
113. Coccinellidae
114. Chrysomelidae
115. Coccinellidae

## Part 2: Traditional- Slides and Questions

116. Megaloptera
117. Pheromones
118. No
119. Nothing
120. Rest on vegetation (are nocturnal)
121. Lepidoptera
122. Nymphalidae
123. Danaidae
124. Flat
125. Spring
126. Mantids, mice, ants, wasps, ladybirds, lacewings
127. Modified into brushes and not used for walking
128. Homoptera
129. Aphididae; Aphid (must have both)
130. Slowly, do not jump or hop
131. No, only have wings in special conditions
132. Honeydew
133. Cornicles or siphunculi
134. **Parthenogenesis**: a type of asexual reproduction in which the offspring develops from unfertilized eggs. Female aphids are parthenogenetic.
135. Mantodea; Mantids/Praying Mantis (must have both)
136. The joke is funny because the female devours the male's head after mating.
137. Catching prey
138. Short and multisegmented
139. Males are fully winged, while females have reduced/no wings
140. Homoptera
141. Dactylopiidae
142. Can't move
143. Cacti, prickly pears
144. Red
145. 3-6 generations/year
146. Female = 3; Male = 5
147. Yes
148. Diptera
149. Simuliidae
150. No
151. 11 segments
152. River blindness

153. No
154. Females
155. Sunrise and sunset
156. Grylloblattodea
157. Dermaptera
158. Brown = Male; Yellow = Female
159. Chewing
160. No
161. Yes
162. No (doesn't live with humans)
163. Incomplete (Hemimetabola)
164. Cerci; Used for grooming, mating, defense, courtship, or folding wings
165. Isoptera
166. Worker; Doesn't have prominent mandibles or wings
167. Behavior and ecology
168. Important decomposers
169. Incomplete
170. No
171. Strepsiptera
172. Male; Females don't have legs/wings
173. Sensory perception
174. No
175. Usually less than 5 hours
176. Fan-like
177. .5-4mm
178. Mecoptera
179. Boreidae
180. Panorpidae
181. No
182. Dead/dying insects
183. Rostrum
184. B
185. 2
186. No, not abundant enough to have any impact
187. Neuroptera; Chrysopidae
188. Neuroptera; Myrmeleontidae
189. Adult
190. Larva
191. No
192. Threadlike/ Filiform
193. In grass & weeds & on tree/shrub foliage
194. Arid and sandy habitats
195. Hemiptera
196. Gelastocoridae
197. Yes, they're hidden under the head
198. Small insects
199. Tropics
200. Toad

## Section 2: Anatomy

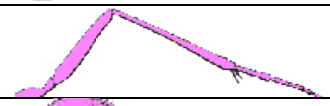
### Part 1: Legs

217. Coxa
218. Trochanter
219. Femur
220. Tibia
221. Tarsi

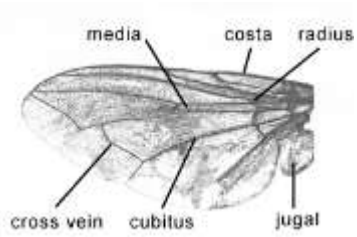
### Part 3: Immature Forms

201. Coenagrionidae
202. Gomphidae
203. Lestidae
204. Aeschnidae
205. Libellulidae
206. Odonata
207. Trichoptera
208. Calliphoridae
209. Culicidae
210. Cerambycidae
211. Tenebrionidae
212. Myrmeleontidae
213. Saturniidae
214. Sphingidae
215. Papilionidae
216. Tenebrionidae

222. Pretarsus
223. 3 pairs
224. Completed table will look like this:

| | | |
|---|---|---|
| **Saltatorial** *Grasshoppers* | adapted for jumping |  |
| **Raptorial** Praying Mantis | Catching & holding prey |  |
| **Cursorial** Ground beetles; Cockroaches | Adapted for running |  |
| **Fossorial** Mole Crickets | Adapted for digging in soil |  |
| **Natatorial** Diving Bugs and Water Beetles | Adapted for swimming |  |

## Part 2: Wings

225. 


226. Two pairs
227. Halteres
228. Gyroscopic stabilization during flight
229. Coleoptera
230. Front wings that are leathery and parchment-like in texture; Orthoptera, Mantodea, Blattodea

## Section 3: Taxonomy

231. Fill in the blanks. Also, under each taxon, list as many required characteristics for each as you know. Kingdom is done for you.

Insects are members of….

- Kingdom Animalia

Multicellular; Heterotrophic; Eukaryotic

- Phylum Arthropoda

Invertebrate; Have exoskeleton; Segmented body; Joined appendages; bilateral symmetry; Lots of pairs of legs

- Subphylum Mandibulata

Modified appendages (mandibles) flanking the mouth and used as jaws

- Superclass Hexapoda

6 legs; Head, thorax, abdomen

- Class Insecta

Invertebrates; exoskeleton made of chitin; 3 pairs of jointed legs; compound Eyes; 1 pair of antennae