

2014-2015 Entomology Qualifier Answer Key

If you have any issues with the answers, please contact Regina Chen/Clements HS.

1. Lepidoptera
2. Papilionidae
3. Swallowtails
4. Osmeterium
5. Pheromones, foul-smelling chemicals, terpenes
6. Hemiptera
7. Miridae
8. Cuneus
9. Hemelytra
10. Strepsiptera
11. Male
12. Hindwings
13. Hymenoptera
14. Megachilidae
15. Leaf cutter bees
16. Cleptoparasites
17. Scopa
18. Ventral/bottom/underside surface of the abdomen
19. Coleoptera
20. Buprestidae
21. Metallic wood-boring beetles
22. Elytra
23. Homoptera
24. Dactylopiidae
25. Scale (twig or leaf)
26. Red dyes/pigments
27. Homoptera
28. Fulgoridae
29. Fulgorid planthoppers
30. Lanternflies, lanthorn flies
31. Collembola
32. Furcula
33. Retinaculum
34. Diptera
35. Tephritidae
36. Fruit flies, huskfly
37. Reduce to halteres; halteres are gyroscopes used for balance and flying straight
38. Coleoptera
39. Passalidae
40. Bess beetles
41. Elbowed antennae
42. They make squeaking sounds by rubbing roughened areas under their wings across their back.
43. Lepidoptera
44. Hesperiiidae
45. Skippers
46. 45 degrees
47. Leaves and silken strands
48. Orthoptera
49. Gryllotalpidae
50. Mole crickets
51. Fossorial
52. Anoplura
53. Sucking lice
54. Mammalian blood
55. Typhus
56. Trichoptera
57. Caddisflies
58. Caddisworms
59. Aquatic/freshwater environments
60. Coleoptera
61. Cicindelidae
62. Tiger beetles
63. Cursorial
64. Diptera
65. Tachinidae
66. Postscutellum
67. Arista
68. Odonata
69. Libellulidae
70. Pterostigma
71. Nodus
72. Lepidoptera
73. Nymphalidae

74. Brush-footed butterfly
 75. Batesian
BONUS - Viceroy butterfly (look at wing venation)
76. Hemiptera
 77. Corixidae
 78. Water boatmen
 79. Natatorial
 80. Rights-side up, bottom
81. Hymenoptera
 82. Mutillidae
 83. Velvet-ants
 84. Male – wings
85. Arctiidae
 86. Tiger moths, wooly worms
 87. Tympanum
 88. Silk and their own hair
89. Curculionidae
 90. Genuiculate/elbowed
 91. Rostrum/snout/beak
92. Ichneumonidae
 93. Nectar and water
 94. Pedicel/petiole
 95. The larvae are parasites of a wide variety of insects and spiders and are important in controlling insect populations.
96. Mecoptera
 97. Boreidae
 98. Wet mosses
99. Phasmatodea
 100. Parthenogenesis
101. Kingdom: Animalia, Phylum: Arthropoda, Class: Insecta
 102. Chitin
 103. Pollination, decomposition of organic matter, recycling of carbon, recycling of nitrogen, recycling of nutrients, population control of harmful invertebrates, direct production of food, etc.
 104. Damage crops, are household pests, are parasites, bite/sting, prey on domestic animals, consume human
105. food/clothing/possessions, destroy trees/wood/paper, transmit disease, etc.
 Malaria, arboviral encephalitides, dengue fever, Rift Valley fever, West Nile encephalitis viral infection)
106. Chagas disease
BONUS – kissing bug (*Triatoma sanguisuga*)
107. D (Apterygota)
 108. G (Endopterygota)
 109. B (Hemimetabolous)
 110. A (Ametabolous)
 111. C (Holometabolous)
112. Hindwing
 113. Forewing
 114. Compound eye
 115. Simple eye/ocelli
 116. Antennae
 117. Ovipositor
 118. Cercus
 119. Spiracles
 120. Air sac
 121. Aorta
 122. Spiracle
 123. Ovaries
 124. Heart
 125. Tracheae
 126. Oviduct
 127. Brain
 128. Ganglion
 129. Nerve cord
 130. Mouth
 131. Salivary glands
 132. Stomach (midgut)
 133. Malpighian tubes
 134. Rectum
 135. Anus
136. Trochanter
 137. Coxa
 138. Femur
 139. Tibia
 140. Tarsi
 141. Pretarsus
142. Myrmeleontidae
 143. Cerambycidae
 144. Sphingidae
 145. Odonata
 146. Culicidae
 147. Tenebrionidae

- 148. Cursorial, saltatorial, natatorial, ambulatory, raptorial, fossorial
- 149. Ecdysis
- 150. Osmoregulation, excretion, production of uric acid, extraction of waste products from hemolymph
- 151. "Insect blood", fluid of the open circulatory system

- 152. Ommatidium
- 153. Dispersal, escape from predators, colonization of new habitats, etc.
- 154. Diapause/quiescence
- 155. 1 cell thick

BONUS – tegmina: modified leathery front wings of Mantodea, Phasmatodea, Dermaptera, Orthoptera, and Blattodea

BONUS – sucking

BONUS – apolysis: the separation of the cuticula from the epidermis

BONUS – poikilotherm: a cold-blooded organism, an organism whose internal temperature varies considerably

BONUS – Johnston's organs: a collection of sensory cells in the pedicel of antennae that detect motion, act as mechanoreceptors for air vibrations

BONUS – feeding, sensing, movement, reproduction