

## Instructions (shown before students start the test)

**Please read the following instructions, they are crucial to formatting answers so you can earn points.** This test has 111 questions, 159 points, and is 50 minutes long. There are 10 "stations" on this exam but you are free to answer all questions in any order and progress at your own pace. Though the individual station timings are not enforced in any way, this is very much still a stations test in spirit. If you are taking too long on one station, don't hesitate to move on.

- ^ means a tiebreaker
- \* means will be hand-graded but please keep these concise!
- All answers must be spelled correctly (auto-grader will mark them wrong otherwise); for any identification, give the **common name**. For species, abbreviate the genus and write out the specific epithet (H. sapiens, NOT Homo sapiens).
- All numbers should be entered as "1", not "one".
- Fill-in-the-blank questions are generally one word per blank unless specified otherwise and use the official spellings of all taxa on the 2021 National Bird List.
- Identification questions are at the Regional level.
- Brevity is your friend! Some questions require that you answer in "no more than one sentence", but really these can be answered with just a few words in most cases. This will help you answer questions faster (improper grammar is fine within reason).
- This exam is open-note, closed-internet; looking up information online is strictly prohibited and a violation of science olympiad ethics.
- **Please don't stress too much on fill in the blank questions, all of them (we will try our best) will be hand graded and double checked.**
- Feel free to message me if you run into any issues while taking the exam, especially with the audio file. Good luck and you got this!!!

~Alisa Zhang (Mason '20, Pitt '24) axolotl#5248 on Discord

Per Texas Science Olympiad rules, you must have printed notes for this event. If you are communicating with your partner through a voice or video call, please start it before you begin the test itself.

Significant time spent outside of the browser window is grounds for a penalty or disqualification per TSO policies.

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## Station 1

1. (1.00 pts)



Identify Specimen A (edited black and white for the next question).

2. (2.00 pts) Specimen A has a bare patch of skin behind each eye. What color is the part closest to the eye and what color is the part farthest back (neither are white)?

3. (1.00 pts) What foot arrangement does Specimen A have?

4. (3.00 pts) Which of the following does the roadrunner eat?

(Mark **ALL** correct answers)

- ☐ A) Grass
- ☐ B) Scorpions
- ☐ C) Nestlings
- ☐ D) Eggs
- ☐ E) Sumac seeds
- ☐ F) Cacti

5. (1.00 pts) Which mating system does Specimen A have?

- ☐ A) Polygyny
- ☐ B) Polyandry
- ☐ C) Polygynandry
- ☐ D) Monogamy

6. (1.00 pts) Which type of tribe believed roadrunners were medicine birds?

7. (3.00 pts) Which of the following will the male do during courtship?

(Mark **ALL** correct answers)

- ☐ A) Lift and drop wings
- ☐ B) Spread tail
- ☐ C) Scratch ground
- ☐ D) Offer food
- ☐ E) Run in circles
- ☐ F) Lift head

8. (1.00 pts) What time of day do males incubate the nest?

9. (4.00 pts) \*Describe how Specimen A regulates its body temperature throughout the day.

10. (1.00 pts) ^What is the name of the predator that chases after Specimen A in the Warner Brothers Cartoon?

## Station 2

11. (1.00 pts)



Identify Specimen B.

12. (1.00 pts) What region of the US does Specimen B most commonly winter in?

13. (1.00 pts) Which other bird on the list is Specimen B commonly seen foraging and feeding with?

14. (4.00 pts) Which of the following are true statements about Specimen B?

(Mark **ALL** correct answers)

- ☐ A) Eggs are gray marked with dark streaks
- ☐ B) Both female and male incubate the eggs
- ☐ C) Male feeds the female while incubating
- ☐ D) Both parents feed the nestlings
- ☐ E) They lay 2 broods per year
- ☐ F) It can winter in Russia

15. (2.00 pts) Areas with which two tree types are preferred by Specimen B?

16. (1.00 pts) What does Specimen B's name refer to? (two words, singular)

17. (2.00 pts) What kind of food does Specimen B eat when feeding young? What about normally? (both plural)

18. (1.00 pts) In which season can Specimen B be found farthest south?

19. (1.00 pts) What time of day does Specimen B sing the most?

20. (3.00 pts) \*Describe this bird's courtship ritual. Who arrives at the breeding grounds first? What does the male do in the air and on the ground to court the female?

### Station 3

21. (1.00 pts)



Identify Specimen C.

**22. (1.00 pts)** What is Specimen C?

- ☐ A) Eagle
- ☐ B) Hawk
- ☐ C) Osprey
- ☐ D) Falcon

**23. (2.00 pts)** What is unique about Specimen C within the group of birds you selected above?

- ☐ A) It builds its nest in a tree
- ☐ B) It that steals food
- ☐ C) The females are larger than males
- ☐ D) Fledglings have longer flight feathers
- ☐ E) Their wings dig through the air when they fly

**24. (1.00 pts)** What does Specimen C use to kill its prey?

**25. (1.00 pts)** What are the plumes on Specimen C's legs called?

**26. (1.00 pts)** What is the status of Specimen C according to the United States Fish and Wildlife Service?

**27. (4.00 pts)** Which of the following would Specimen C look for as signals of food?

(Mark **ALL** correct answers)

- ☐ A) Circling vultures
- ☐ B) Large areas of freshly overturned soil
- ☐ C) Wildfires
- ☐ D) Raptors with a prey item
- ☐ E) Highways
- ☐ F) Stampeded cattle

**28. (3.00 pts)** Which three states can Specimen C be found in? (alphabetize if you want to make my life easier)

**29. (1.00 pts)** The rule created by which individual determines that individuals of Specimen C that live in colder areas are larger?

30. (1.00 pts) What is the name of the white patch on the outer primaries revealed in flight?

31. (1.00 pts) How many days will Specimen C incubate its eggs for? (just enter a number)

32. (1.00 pts) T/F: This bird migrates.

☐ True ☐ False

33. (1.00 pts) What is a male in the genus of Specimen C called?

## Station 4

34. (1.00 pts)



Identify Specimen D.

35. (1.00 pts) Which sense does Specimen D use the most when hunting?

- ☐ A) smell
- ☐ B) hearing
- ☐ C) taste
- ☐ D) sight
- ☐ E) touch

36. (2.00 pts) \*What is different between the habitats where Specimen D breeds and where they winter?

37. (4.00 pts) Which of the following are true about Specimen D?

(Mark **ALL** correct answers)

- ☐ A) Lays 3-4 eggs
- ☐ B) Eggs are white and speckled red
- ☐ C) Female incubates the egg entirely
- ☐ D) Incubation for 5-10 days
- ☐ E) They can fly after 16-18 days
- ☐ F) Young are tended to by parents after fledging

38. (1.00 pts) What makes up Specimen D's diet in the winter?

39. (1.00 pts) \*What is different about Specimen D's migration from most other songbirds?

40. (1.00 pts) Specimen D has only one species in its genus; what word describes this taxonomic genus?

41. (1.00 pts) What color is Specimen D's patch on the crown?

42. (1.00 pts) What is Specimen D's call frequently compared to?

## Station 5

43. (1.00 pts) Identify Specimen E from the audio file.

0:00 / 0:13

44. (2.00 pts) \*What are two nicknames for Specimen E?

45. (1.00 pts) An increase in use of what led to the decimation of Specimen E's populations?

46. (1.00 pts) What verb describes how Specimen E acquires food?

47. (1.00 pts) What is the name of a group of Specimen E?

48. (2.00 pts) What describes their mating system when nesting? What about when breeding?

49. (1.00 pts) Hatchlings of Specimen E are altricial.

☐ True ☐ False

50. (1.00 pts) The parents do not tend to the young after they leave the nest.

☐ True ☐ False

51. (1.00 pts) The young feed themselves after leaving the nest.

☐ True ☐ False

52. (1.00 pts) What mainly determines the divisions between the 22 subspecies of Specimen E?

## Station 6

53. (1.00 pts)



Identify Specimen F.



54. (1.00 pts) What is the nickname of Specimen F?

55. (2.00 pts) What forest type does Specimen F nest in? What about forage in?

56. (2.00 pts) What makes up the majority of Specimen F's diet? What do they occasionally supplement their diet with?

57. (3.00 pts) \*Describe how Specimen F finds food. In which direction and fashion does it move? What is its body positioned like when foraging?

58. (1.00 pts) Specimen F prefers forests where trees are more far apart.

☐ True ☐ False

59. (1.00 pts) The bills of Specimen F are the only way to tell a male and female apart: a female has a longer bill than the male.

☐ True ☐ False

60. (1.00 pts) Specimen F doesn't forage on tree branches.

☐ True ☐ False

61. (1.00 pts)

Say you encounter a nest of Specimen F and find it has two openings. One faces up and the other faces down. What is the one facing down called? What is the one facing up called?

62. (1.00 pts) Specimen F is an indicator for the effect of what on the environment?

63. (1.00 pts) In which season is Specimen F the least territorial?

Station 7

64. (1.00 pts)



Identify Specimen G.

65. (2.00 pts) In what US state and area do the all white populations of Specimen G reside?

66. (1.00 pts) What color does the bill of Specimen G turn at the beginning of breeding season?

67. (1.00 pts) How many toes does Specimen G have facing forward?

68. (1.00 pts) What makes up the majority of Specimen G's diet?

69. (3.00 pts) Which of the following are methods of hunting that Specimen G uses?

(Mark **ALL** correct answers)

- ☐ A) hovering over water
- ☐ B) diving head first
- ☐ C) diving feet first
- ☐ D) jumping from perches
- ☐ E) walking slowly
- ☐ F) probing

70. (2.00 pts) What month does Specimen G depart from the breeding site? What about arrive?

71. (1.00 pts) Specimen G uses powder to clean off fish slime. Where does this powder come from?

72. (1.00 pts) How do parents feed their young?

**73. (1.00 pts)** The young are capable of flight when they leave the nest.

☐ True ☐ False

**74. (2.00 pts)** Who builds the nest? Who gathers materials for the nest?

## Station 8

**75. (1.00 pts)** What word describes bird bones (specifically that they are hollow)?

**76. (2.00 pts)** What word describes the quality of the breastbone as being bent? What type of birds have a breastbone which isn't bent?

**77. (1.00 pts)** What bone is extremely wide in swimming birds and long in walking birds?

**78. (1.00 pts)** What is the name of the hooks emerging from each rib to hook onto the posterior rib? (two words, plural)

**79. (1.00 pts)** What skull type do birds have?

- ☐ A) anapsid  
☐ B) synapsid  
☐ C) diapsid  
☐ D) euryapsid

**80. (1.00 pts)** Which bone is numerous fused caudal vertebrae?

**81. (1.00 pts)** Which muscle makes up 15-25% of a bird's body weight?

**82. (1.00 pts)** What are the scales of a bird made of?

**83. (3.00 pts)** What are the classifications of bird scales in order from smallest size to largest?

84. (1.00 pts) \*Why do birds have a beak instead of a jaw or teeth?

85. (1.00 pts) Birds have the largest eyes to body size ratio in all of the animal kingdom.

☐ True ☐ False

86. (1.00 pts) Most birds cannot move their eyes.

☐ True ☐ False

87. (1.00 pts)



Identify this toe arrangement.

88. (1.00 pts)



Identify this toe arrangement.

89. (1.00 pts)



Identify this toe arrangement.

90. (1.00 pts)



Identify this toe arrangement.

## Station 9

91. (1.00 pts)



Identify Specimen H.

92. (1.00 pts) What is the nickname for Specimen H?

93. (1.00 pts) What body part on the head is white when Specimen H is in breeding plumage?

94. (1.00 pts) How many eggs does Specimen H lay? (range is okay)

95. (3.00 pts) Which of the following are colors that can be found on Specimen H's eggs?

(Mark **ALL** correct answers)

☐ A) orange

- ☐ B) pale blue
- ☐ C) black
- ☐ D) brown
- ☐ E) red
- ☐ F) purple

96. (1.00 pts) What does this bird do if its nest is brood parasitized?

97. (1.00 pts) Which bird has outcompeted Specimen H in cities?

98. (2.00 pts) Who constructs the nest? How many days does it take to construct it?

99. (1.00 pts) Who feeds the nestlings?

- ☐ A) Male
- ☐ B) Female
- ☐ C) Both parents

100. (1.00 pts) What is a group of Specimen H known as?

101. (2.00 pts) \*How is Specimen H different from many other sparrows?

## Station 10

102. (1.00 pts)



Identify Specimen I

103. (2.00 pts) What type pigment causes Specimen I's color? What is the name of the specific pigment?

**104. (1.00 pts)** Which continent is Specimen I most widespread on?

**105. (1.00 pts)** How many years old is Specimen I when it first begins breeding?

**106. (1.00 pts)** In what habitat do Florida populations of Specimen I nest?

**107. (1.00 pts)** Specimen I can fly before leaving the nest.

☐ True ☐ False

**108. (1.00 pts)** Specimen I sleeps standing on one leg with its head tucked under its back and shoulder feathers.

☐ True ☐ False

**109. (4.00 pts)** \*Describe this bird's courtship rituals. How do they interact?

**110. (2.00 pts)** Which of the following is in the diet of Specimen I?

(Mark **ALL** correct answers)

- ☐ A) crayfish
- ☐ B) fish
- ☐ C) beetles
- ☐ D) slugs
- ☐ E) mollusks
- ☐ F) roots

**111. (1.00 pts)** What sense does Specimen I use the most when foraging?

- ☐ A) Sight
- ☐ B) Smell
- ☐ C) Taste
- ☐ D) Touch
- ☐ E) Hearing

Thank you for taking my Ornithology test! Here's a meme to reward you for finishing your test:



Contact me if you have any questions at all and best of luck at awards!

If you have any feedback about any of the exams at this tournament, please let us know through this form: <https://tinyurl.com/utreg21feedback> (<https://tinyurl.com/utreg21feedback>)