

Science Olympiad Division B
Test SSS 2019



Meteorology
Answer Key



Team Name: _____
Team #: _____
Student #1: _____
Student #2: _____

Do not open this packet until instructed to open it.

This is a 50-minute test. The test may be taken apart but all answers must be recorded on the answer sheet provided. When taking this test remember that you can choose more than one answer for multiple choice questions but have to choose all correct answers to get full credit.

Part 1

1. Easterlies
2. Westerlies
3. NE Trade Winds
4. Dry and stable
5. A, C, D
6. A
7. D
8. B
9. B
10. C
11. A
12. B
13. B, D
14. B
15. C
16. D
17. C
18. A, B, C
19. The squall lines caused significant weather changes and increased the severity of the storm.
20. B
21. C
22. D
23. C
24. A, B, C, D
25. C
26. B, C
27. A, B, C
28. B
29. C
30. B
31. A, B, C
32. C
33. C, D
34. B
35. A, B
36. Number of reports
37. C
38. B
39. A
40. The increase is linear and long-term with an average increase of 15 tornadoes per year
41. The severity, damage, and frequency of the wind gusts has been steadily increasing.
42. A
43. B
44. C
45. D
46. Number of reports
47. A
48. B
49. D
50. C
51. A, B, C, D
52. C
53. A
54. C
55. D
56. D
57. Rapid and quick changes in short periods of time
58. Low-level vertical shear profiles in the outflow field should be of equal but oppos

sign of the shear in the low-level inflow air for optimal redevelopment along the outflow boundary and the gust front should not be moving quite fast and the atmospheric instability should not be marginal.

59. The main charging area is represented in the image.

60. The basic dipole charge system of a thunderstorm consists of a upper positive charge area above a lower negative charge area