

YUSO 2017 ROCKS & MINERALS

ANSWER KEY

Answer Key:

Station 1:

1. A. chalcopyrite b. Sphalerite c. Pyrite
2. Specimen A/Chalcopyrite
3. Sulfides
4. Often used as ores/source of important elements or something similar to that
5. CuFeS_2
6. D
7. Specimen B/Sphalerite

Station 2:

8. Quartz, plagioclase, mica, etc
9. Pegmatite
10. Felsic
11. Dikes/Metamorphic Belts/Cratons
12. B

Station 3:

13. A. Quartz B. Olivine C. Muscovite D. Hornblende
14. Si and O
15. Quartz + Olivine, or specimens a and b
16. Used as a cheap glass alternative in Russia
17. A

Station 4:

18. A- Dolomite B- Pyrite C- Hematite D- Aragonite
19. A- Druse B- Radiating/Dollar C- Botryoidal D- Acicular
20. C
21. Malachite, Goethite, Fluorite (only need two)

Station 5:

22. A. Conglomerate B. Breccia C. Shale
23. Clastic
24. A. erosion b. weathering
25. Breccia (B), Conglomerate (A), Shale (C)
26. B
27. False
28. Clay minerals

Station 6:

29. A. Ulexite B. Calcite

30. CaCO_3

31. Aragonite

32. Satin Spar Gypsum

33. C

34. Iceland Spar

Station 7:

35. A. Diatomite B. Limestone Chalk

36. A

37. A

38. Coccoliths

39. E

40. B

Station 8:

41. Vitreous/Glassy

42. Waxy or Greasy

43. Metallic

44. Dull or Earthy

45. Silky

46. Resinous

Station 9: a = gneiss b = schist c = migmatite

47. B, a, c

48. Foliation

49. B

50. A

51. C

52. Garnet, Talc, Tremolite, staurolite, beryl, tourmaline, epidote... many more

Station 10:

53. A- Chalcedony b- milky quartz c- rose quartz

54. Two varieties of SiO_2 present, one triclinic one monoclinic. Also is much more soluble than quartz and has different crystal habit; all these could work

55. Impurities

56. C

57. B

58. C

59. B

Station 11:

60. A: shield B: Strato/Composite

61. D

62. C

- 63. Basalt, Scoria
- 64. Rhyolite, andesite, pumice, scoria
- 65. Stratovolcano, cinder cone
- 66. Pahoehoe

Station 12:

- 67. A – anthracite B- bituminous
- 68. C
- 69. C
- 70. D
- 71. 77-87, 87+
- 72. c

Station 13:

- 73. A. barite B. azurite C. apatite
- 74. BaSO₄
- 75. E
- 76. B
- 77. A B D
- 78. A: Aeolian/Desert
B: Lake/Lacustrine
C: River/Fluvial
D: Delta
E: Shallow Marine/Continental Shelf
- 79. E/Shallow Marine
- 80. Delta (D)
- 81. Aeolian/Desert (A)
- 82. C
- 83. A: Tremolite B: Tourmaline C: Talc
- 84. D
- 85. Elbaite
- 86. Baby powder, Paper making, plastic,
paint filler, dry lubricant, table tops,
switchboards, food additives, etc.
- 87. C
- 88. Tremolite (A)
- 89. Pyroelectricity
- 90. James Hutton
- 91. Van der Waals forces
- 92. Australia
- 93. Rhodonite
- 94. Felsic/Acidic
- 95. Barite
- 96. Centralia, Pennsylvania
- 97. Protolith
- 98. Shale
- 99. Barite, Gypsum
- 100. Celestite