

## UChicago Solar System Answer Key

- |                      |                             |
|----------------------|-----------------------------|
| 1. B, C              | 15. a. C-type; carbonaceous |
| 2. C                 | b. S-type; siliceous        |
| 3. A                 | c. M-type; metallic         |
| 4. A                 | 16. C-type (c.)             |
| 5. C                 | 17. A                       |
| 6. B                 | 18. D, E                    |
| 7. B                 | 19. C                       |
| 8. A                 | 20. C                       |
| 9. Saturn            | 21. E                       |
| 10. B, D, E          | 22. A                       |
| 11. Mostly water/ice | 23. October 2017            |
| 12. Mars and Jupiter | 24. A, B, E                 |
| 13. 1 AU             | 25. B                       |
| 14. B                |                             |

Note: Options for questions 10 and 24 were treated as 5 True/False questions each worth 4/5 of a point; the rest of MC were all or nothing.

26. Make sure you understand this question! It shouldn't be hard but almost nobody got it. Sorry if it was unclear (if that was the case, next time try asking the supervisor)!

- a.  $r_{\text{cal}}/r_{\text{moon}} = (P_{\text{cal}}/P_{\text{lun}})^{2/3}$
- b.  $r_{\text{cal}}/r_{\text{moon}} = (30/27)^{2/3} = (10/9)^{2/3}$  (no need to simplify)
- c. Yes

27.

- a. Neptune, Voyager 2, 1989 (accepted range: 1984 - 1994)
- b. Pluto, New Horizons, 2015 (accepted range: 2010 - 2020 .. heh)
- c. Ceres, Dawn, 2015 (accepted range: 2010 - 2020 .. heh)
- d. Saturn, Cassini, 2017 (accepted range: 2012 - 2022 .. heh)