

Answers in RED have scoring

notes at the bottom **Astronomy — 2016 — Answer sheet**

Station A (1 pt per question unless marked otherwise)

Subscore: _____ / 29

- | | | | |
|-----------------------------|------------------------|--|-----------------------------------|
| A1. <u>A</u> | A8. <u>A</u> | A15. <u>HL Tauri -or- HL Tau</u> | A22. <u>D</u> |
| A2. <u>C</u> | A9. <u>A</u> | A16. <u>Sub-millimeter -or- Sub-mm</u> | A23. <u>A</u> |
| A3. <u>A</u> | A10. <u>B</u> | A17. <u>D</u> | A24. <u>D</u> |
| A4. <u>B</u> | A11. <u>C</u> | A18. <u>C</u> | A25. <u>D</u> |
| A5. <u>HD 106906b</u> | A12. <u>D</u> | A19. <u>D</u> | A26. <u>A</u> |
| A6. <u>Infrared -or- IR</u> | A13. <u>C</u> | A20. <u>M42</u> | A27. <u>Point spread function</u> |
| A7. <u>2MASSJ2228-4310</u> | A14. <u>Kepler 186</u> | A21. <u>A</u> | A28. <u>B</u> |
| | | | A29. <u>HD 95086</u> |

Station B (1 pt per question unless marked otherwise)

Subscore: _____ / 31

- | | | | | |
|-------------------|----------------------|--------------------------------|---------------|---------------|
| B1. <u>D</u> | B7. <u>F</u> | B13. <u>(2) 1.9* x (H) / C</u> | B18. <u>B</u> | B24. <u>A</u> |
| B2. <u>Dwarfs</u> | B8. <u>7-8000* K</u> | B14. <u>0</u> | B19. <u>A</u> | B25. <u>C</u> |
| B3. <u>A</u> | B9. <u>C</u> | B15. <u>VII</u> | B20. <u>C</u> | B26. <u>A</u> |
| B4. <u>D</u> | B10. <u>D</u> | B16. <u>D</u> | B21. <u>D</u> | B27. <u>C</u> |
| B5. <u>B</u> | B11. <u>C</u> | B17. <u>(1) Uranus</u> | B22. <u>D</u> | B28. <u>C</u> |
| B6. <u>A</u> | B12. <u>A</u> | <u>(1) Neptune</u> | B23. <u>B</u> | B29. <u>B</u> |

Station C (point values in parentheses)

Subscore: _____ / 30

- | | | |
|-------------------------|----------------------------|--|
| C1. <u>(2) 29*</u> pc | C5. <u>(2) 9100*</u> times | C9. <u>(3) 0.017*</u> AU |
| C2. <u>(2) 380*</u> AU | C6. <u>(2) 2.1*</u> | C10. <u>(2) 2.2x10⁶*</u> W/m ² |
| C3. <u>(3) 3200*</u> pc | C7. <u>(4) 0.19*</u> | C11. <u>(2) 7.5x10²⁰*</u> W |
| C4. <u>(2) 13*</u> | C8. <u>(2) .0183*</u> | C12. <u>(4) 3.0x10³*</u> K |

Scoring notes

Answers with * must be to correct number of significant figures.

A7. Also accept 2MASSJ2228, 2MASSJ22282889-431026, or anything that is mostly correct. That's a lot of numbers to transcribe.

A20. Also accept "Orion Nebula" or "Great Orion Nebula".

B2. Also accept "Main sequence".

B7. Accept either 7000 or 8000.

B13. Number and circle must be correct for credit.

B17. Order does not matter.

C2. Accept 1300 for 1 point.

C4. Accept 5.0 for 1 point.

C6. Accept 0.26 for 1 point.

C10. Accept 52000 for 1 point.

Tiebreakers: Station B subscore, Station A subscore