

SCORE  
(5 pts max)

**ASTRONOMY 5  
THIRD HOUR SESSION "C"**  
**ACTIVITY: Constellation Charts: Part II –  
Ecliptic, Seasons, Precession**

**NAME** KEY-C

**DATE**  **ID#**

1. Other than stars, name three other types of celestial objects plotted on the charts.

Galaxies	Clusters	Nebulae
----------	----------	---------

2. Name three constellations found on the ecliptic.

Capricornus, Aquarius, Pisces, Aries, Taurus, Gemini, Cancer, Leo, Virgo, Libra, Scorpius, Sagittarius, and Ophiuchus since it also lies on the ecliptic

3. Which constellation does the Sun occupy on the date of November 10 ?

Libra

4. Which constellation will the Sun occupy during the next Equinox ? And for the Solstice that follows this Equinox , which constellation will the Sun occupy?

Virgo                      Sagittarius

5. Near what line should you find the Moon or the planets?

Ecliptic

6. Other than the Sun, which very bright stars are near the meridian at noon on June 10 ?

Capella                      Rigel

7. What are the Right Ascension and Declination coordinates for the star Albireo in the constellation of CYGNUS ?

19h 30m ( $\pm 5m$ )                       $+28^\circ$  ( $\pm 1^\circ$ )

8. What is the name of the star at RA = 2h 20m and Dec =  $-3^\circ$  ? From the chart legends, what type of star is it and what is its magnitude?

Mira                      Variable                      3

9. If Mars is in opposition on August 1 , what constellation does it occupy?

Capricornus

(Questions continue on back)

10. In what year was the star Thuban considered the North Polar Star?

2700 BC ( $\pm 500$  BC)

11. Examine the small segments of the SC001 star charts below. The segment on the left is from a chart of epoch 1925. The one on the right is set for epoch 2000, like the one you currently have. What is the Bayer designation of the star indicated on the '1925' map? How much did this star's position change in 75 years (degrees)? What phenomenon accounts for this change in location?

$\omega$ (omega) or $\omega$ (omega) Pisces	1 degree ( $\pm 0.25^\circ$ )	precession
---	-------------------------------	------------

12. From your estimated amount of movement of the star in #11, calculate the period of one complete cycle of the phenomenon causing this star change in position.

27000 ( $\pm 6000$ ) years

