

## FRAC TRIVIA I QUIZ

Total Points: 100. The amount of points for each question is indicated in parentheses. Minor misspellings are okay, but Sagittarius isn't spelled "L-Y-R-A".  
Time: 30 min.

1. (18 pts.). How many of the 18 constellations representing human figures or features can you name?
2. (16 pts.). How many of the sixteen stars that have an apparent magnitude of 1.0 or less can you name? (You may use either popular names or Greek letter/constellation names [e.g., Alnitak or Zeta Orionis].)
3. (10 pts.) How many of the ten smallest (in apparent size) Messier objects can you name? They don't have to be listed in order.
4. (9 pts.). The largest asterism in the sky is the "**Heavenly G**" of bright stars that form a giant capital **G** around (and including) Orion. Name its nine mag. 0 to mag. 2 stars.
5. (8 pts.). Match the following objects with their descriptions and where they are found:

A. Stephan's Quintet	1. Star charts	a. Camelopardalis
B. Markarian's Chain	2. Collinder 399	b. Pegasus
C. Brocchi's Cluster	3. Galaxy group	c. Virgo/Coma Berenices
D. Kemble's Cascade	4. Galaxy chain	d. Vulpecula
6. (8 pts.). Name eight Messier objects that are bright enough to be seen without binoculars or a telescope from a dark site in, say, Arizona.
7. (6 pts.). Three Messier objects are referred to as "Pinwheel Galaxy." What are they, and what constellations are they in?
8. (5 pts.). Name the five types of nebulae. (Note: Sir Patrick Caldwell-Moore notwithstanding, "bright nebulae" isn't one of them.)
9. (4 pts.). What four dogs are represented in constellations?
10. (2 pts.). What is a Seyfert galaxy, and what Messier galaxy is the brightest known Seyfert?
11. (2 PTS.). At 68 sq. degrees, Crux is the smallest constellation, but cannot be seen from Cox Field; however, the second- and third-smallest constellations are fully visible from Cox Field. Name them.

12. (1 pt.) What is the largest constellation in terms of area?
13. (1 pt.) What is the largest globular cluster in apparent size?
14. (1 pt.) True or False: If you were standing on the floor at the center of the lunar crater Clavius, you could not see its 16,100-ft. walls in any direction.
15. (1 pt.) What is the largest of the 20 brightest stars in actual size?
16. (1 pt.) Which constellation contains the most naked-eye stars (i.e., mag. 5.5 or brighter)? (Three hints: first, it's not **Orion**; second, it's located so low in the sky that we can't see all of its bright stars; and third, two of its stars rank among the ten brightest stars in the sky.)
17. (1 pt.) In a scifi/horror movie from the '60s, a meteor shower from beyond our solar system rained seeds upon Earth that turned into man-eating plants. Name the movie or the deep-sky object from which the seeds came. (Two hints: the object is a Messier object, and its popular name was misspelled in the movie's title.)
18. (1 pt.) Name a well-known deep-sky object that does not appear in any A.L. observing club list.
19. (1 pt.) True or False: The total number of solar and lunar eclipses per year is always between 4-10.
20. (1 pt.) What star will be the North Star 12,000 years from now?
21. (1 pt.) What is the largest asteroid in the solar system?
22. (1 pt.) What asteroid is visible to the naked-eye under optimal observing conditions? (Hint: It's not the same one referred to in #21 above.)
23. (1 pt.) How long will it be before Tom Moore earns his Lunar Club pin? (a) someday; (b) never.

## FRAC TRIVIA I ANSWERS

1. **Andromeda**, the Princess; **Aquarius**, the Water Bearer; **Auriga**, the Charioteer; **Bootes**, the Herdsman; **Cassiopeia**, the Queen; **Cepheus**, the King; **Centaurus**, the Centaur; **Coma Berenices**, Berenice's Hair; **Gemini**, the Twins; **Hercules**, the Strongman; **Indus**, the Indian; **Ophiuchus**, the Serpent Bearer; **Orion**, the Hunter; **Perseus**, the Hero; **Pictor**, the Painter; **Sagittarius**, the Archer; **Sculptor**, the Sculptor; and **Virgo**, the Maiden.

2. Sirius; Canopus; Rigel Kentauri (Alpha Centauri); Arcturus; Vega; Capella; Rigel; Procyon; Achernar (Alpha Eridani); Agena (Beta Centauri); Betelgeuse; Altair; Acrux (Alpha Crucis); Aldebaran; Antares; and Spica.

3. M40; M57; M65; M73; M76; M95; M97; M102; M105; M108.

4. Aldebaran; Capella; Castor; Pollux; Procyon; Sirius; Rigel; Bellatrix (Gamma Orionis), the Hunter's "other" shoulder; and Betelgeuse, Orion's brighter shoulder.

5. A – 3 – b; B – 4 – c; C – 2 – d; and D – 1 – a.

6. Actually, there are 26: M6; M7; M8; M11; M13; M16; M17; M22; M24; M25; M31; M33; M34; M35; M36; M37; M38; M39; M42; M44; M45; M46; M47; M48; M55; and M67.

7. M101 (Ursa Major); M33 (Triangulum); and M99 (Coma Berenices).

8. EMISSION NEBULAE, in which the gases themselves glow; REFLECTION NEBULAE, in which the gases reflect light from stars shining in or near them; PLANETARY NEBULAE, which are shells of gases around dying stars; DARK NEBULAE, composed of matter that neither generates nor reflects light; and SUPERNOVA REMNANTS, the remains of supernova explosions.

9. Canis Major, the Big Dog; Canis Minor, the Little Dog; and Canes Venatici, the Hunting Dogs.

10. A galaxy with an abnormally bright center. M77 in Cetus.

11. #2, Equuleus, the Colt (72 sq. degrees, lies between the "nose" of Pegasus and Delphinus; and #3, Sagitta, the Arrow (80 sq. degrees).

12. Hydra (1,303 sq. degrees).

13. NGC 5139, Omega Centauri (36.3' in dia.)

**14.** True. Measuring 132 x 152 mi. in area, Clavius is one of the largest craters on the Moon. Due to the curvature of the Moon's surface, the crater walls would be beyond and below the horizon, and a person standing in the middle of the crater would see a flat plain stretching to the horizon in all directions.

**15.** Betelgeuse (dia.: 400 million miles, or 80% of the distance from the Sun to Jupiter).

**16.** Centaurus contains 94 stars of mag. 5.5 or brighter.

**17.** *Day of the Triffids* (1963). (Or, M20, Trifid Nebula.)

**18.** California Nebula; Pelican Nebula; Horsehead Nebula; the Coal Sack; Pipe Nebula; Snake Nebula; or any other dark nebula.

**19.** True.

**20.** Vega.

**21.** 1 Ceres (582 mi. in dia.)

**22.** 4 Vesta.

**23.** Either one.