The 1st International Olympiad on Astronomy and Astrophysics

Chiang Mai, Thailand

Experimental Competition (Observation)

Sunday, 2 December, 2007

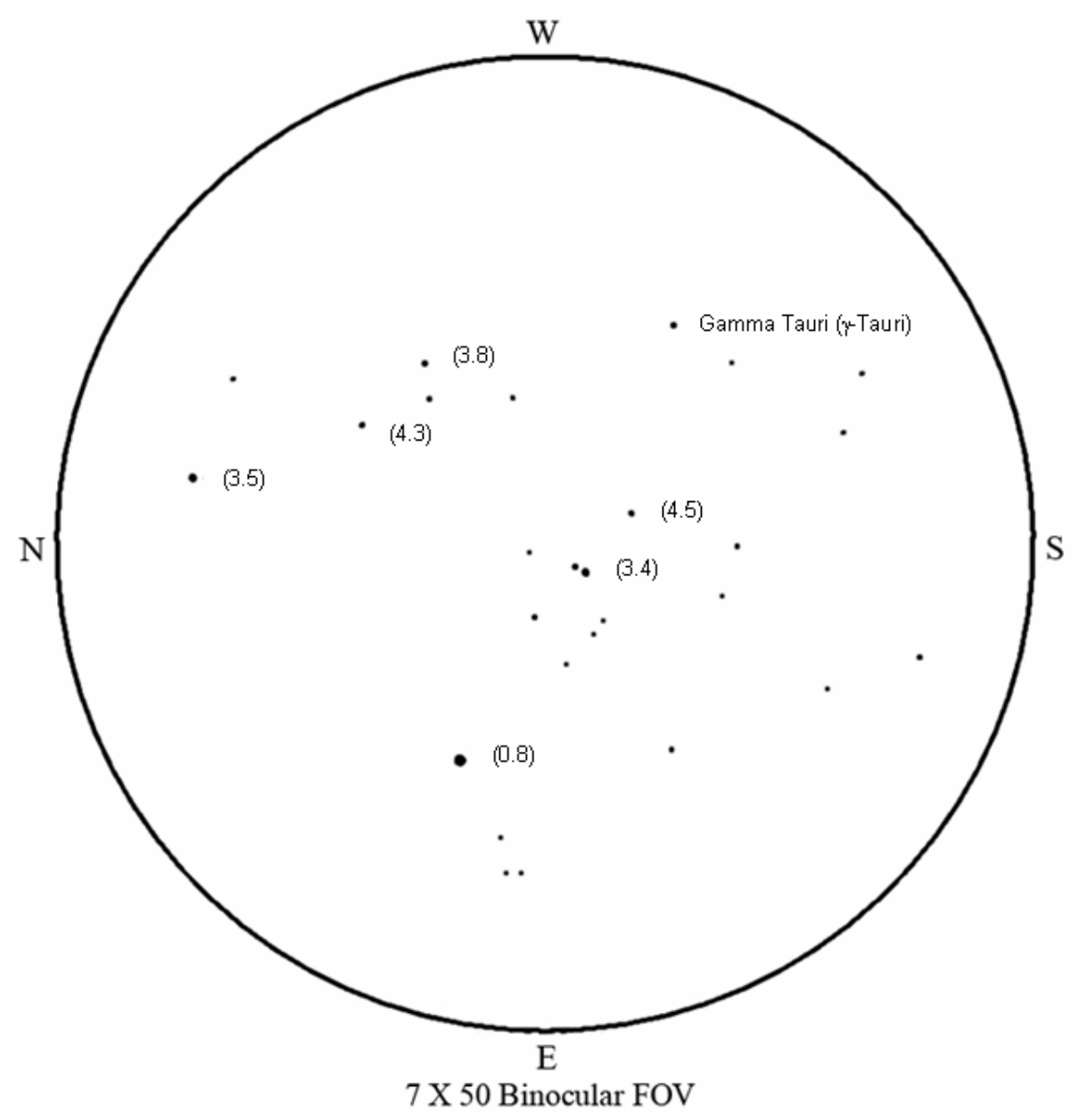
Please read this first:

1. There are 2 parts to the questions. You have to use the provided equipment to point, observe and answer where appropriate.
2. The time available is **40 minutes** in total for the experimental competition (Observation), **20 minutes for each part**.
3. In Part I, use only the provided celestial object pointer to point at the target specified in the questions. **No other pointer is allowed**. The marker (examiner) at each observation station will then mark the answers directly in the question sheet. You must not write anything in the sheet apart from your country code and student code.
4. In Part II, use the provided binoculars to observe the objects and then answer the questions by writing or drawing directly in the question sheets.
5. At the end of both parts, leave the question sheets with the marker (examiner) at each observation station. You are not allowed to take any sheets of paper out of the observation station.
6. Use only the provided pen or pencil.
7. Students given questions in English and national language can answer in any one sheet but must return both to the marker (examiner).
8. Fill the boxes at the top of each sheet of paper with your country code, your student code.

Country Code	Student Code

PART II: Use the provided binoculars (total 10 points)

2.1 The open star cluster "Hyades" in constellation Taurus is one of the nearest clusters to us, being only 151 light years away. From the provided chart with brightness of some stars indicated by the apparent magnitude in parentheses, please estimate the apparent magnitude of the star Gamma-Tauri (γ-Tauri) to the nearest first decimal digit. **(5 points)**

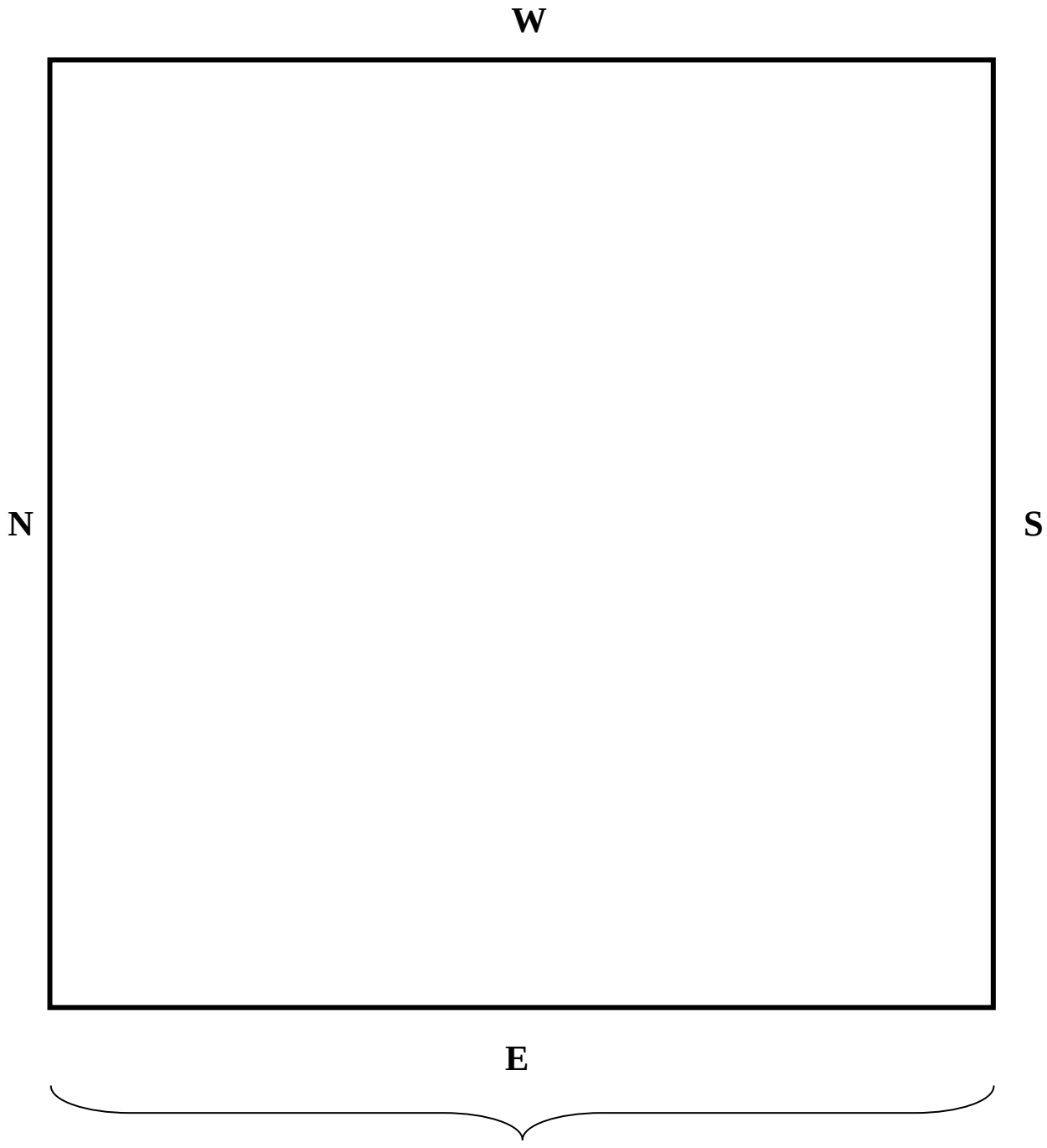


Answer: The apparent magnitude of γ-Tauri = _____

Marker (examiner) comments on sky condition: _____

Country Code	Student Code

2.2 Observe the Andromeda Galaxy (M31) then draw the approximate **shape and size** of the galaxy that you see through the binoculars in the frame below with correct orientation (in equatorial coordinates). The field of view of the binoculars is 6.8 degrees. **(5 points)**



Marker (examiner) comments on sky condition: _____