

13th Singapore Astronomy Olympiad

Practical

14 March 2026

Instructions

1. The Practical portion of this Olympiad is worth a total of **45 marks**.
2. When asked to do so, check that you have **6** printed pages.
3. Write your answers and workings clearly on the answer sheets provided.
4. Submit all used answer sheets.
5. Fill in these details on each side of your answer sheet:
 - Year of competition
 - Your participant code
 - The page number – which should be continuous from 1 to N
 - The question number
6. Cross out all workings or answers you do not wish to be evaluated.
7. If you require assistance (e.g. to visit the restroom, enquire about an ambiguity or possible errata, etc.), please get the attention of the invigilators.

Competition Rules and Regulation

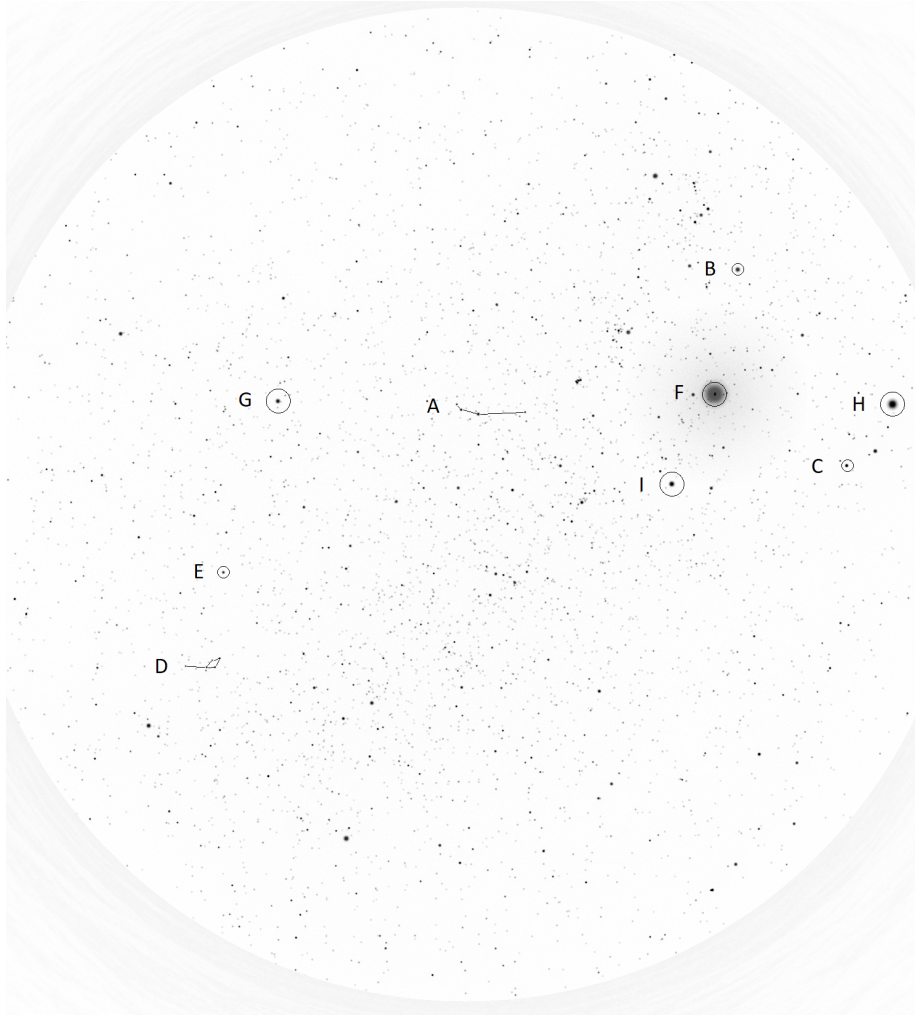
1. Only the use of scientific calculators is permitted. No graphing or programmable calculators are allowed.
2. Disruptive behaviour, cheating, collusion to cheat or any integrity-related offences are grounds for immediate disqualification.
3. You may opt to retain the question paper and constants sheet for personal use. Return all unused answer sheets to the Organising Team.

The 13th Singapore Astronomy Olympiad is jointly organised by Astronomy.SG and the NTU Astronomical Society.

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1 Guess Who? [25]

Using Star map A, answer the following questions.



Star Map A

1.1 Identify objects A to E

A (constellation) [2m]:

B (star) [2m]:

C (star) [2m]:

D (constellation) [2m]:

E (star) [2m]:

1.2

Hence or otherwise, draw the ecliptic in Star Map A. [2m]

1.3

Therefore, identify which object(s) F-H, might be a Solar System Object. Place a tick beside the Solar System Object. [2m]

F: []

G: []

H: []

I: []

1.4

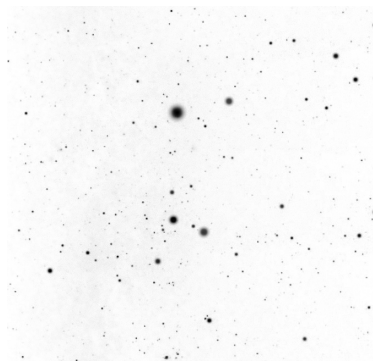
In Star Map A, label the 4 cardinal points and the meridian. [5m]

1.5

Hence or otherwise, identify the constellations J and K.

J [3m]:

K [3m]:



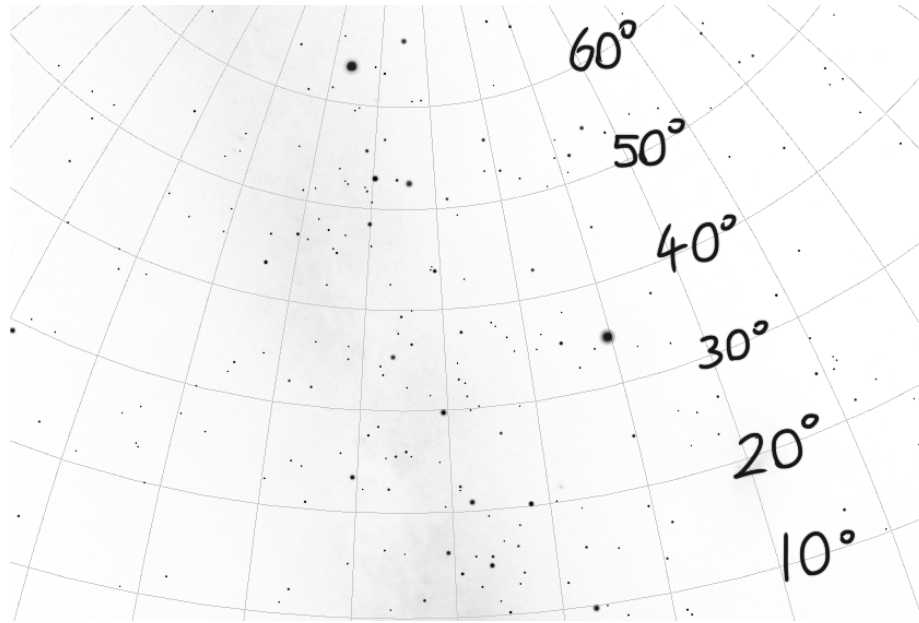
Constellation J



Constellation K

2 Can You See Me? [20]

Star Map B shows a snapshot of some constellations in Singapore within a certain altitude and azimuth at a certain time.



Star Map B

In the space below, mark the row with an X if the star can be seen at that time. Note that Figure D only shows a portion of the stars visible at that time, so stars not visible in Figure D could still be visible in the sky then.

- () Procyon [α Canis Minoris]
- () Canopus [α Carinae]
- () Acrux [α Cruxis]
- () Regulus [α Leonis]
- () Alkaid [η Ursa Majoris]