



ASTROCHALLENGE 2017 OBSERVATION ROUND (THEORY)

INSTRUCTIONS

- This paper consists of 3 printed pages, excluding this cover page.
- Do **NOT** turn over this page until instructed to do so.
- You have 2 hours to finish all questions in this paper.
- At the end of the paper, submit this booklet together with your answer script.
- Your answer script should clearly indicate your school, as well as the individuals in said team.
- It is your team's responsibility to ensure that all pages of your answer script have been submitted.

Part 1: Constellation Identification (60 marks, 15 points each)

Identify and link **one complete constellation** in each image. For each image, circle and name 2 bright stars. Also identify two deep sky objects (or double stars) in the image that is visually observable with a small telescope (or apparent in a short 30s exposure). These objects do not have to be within the complete constellation identified earlier.



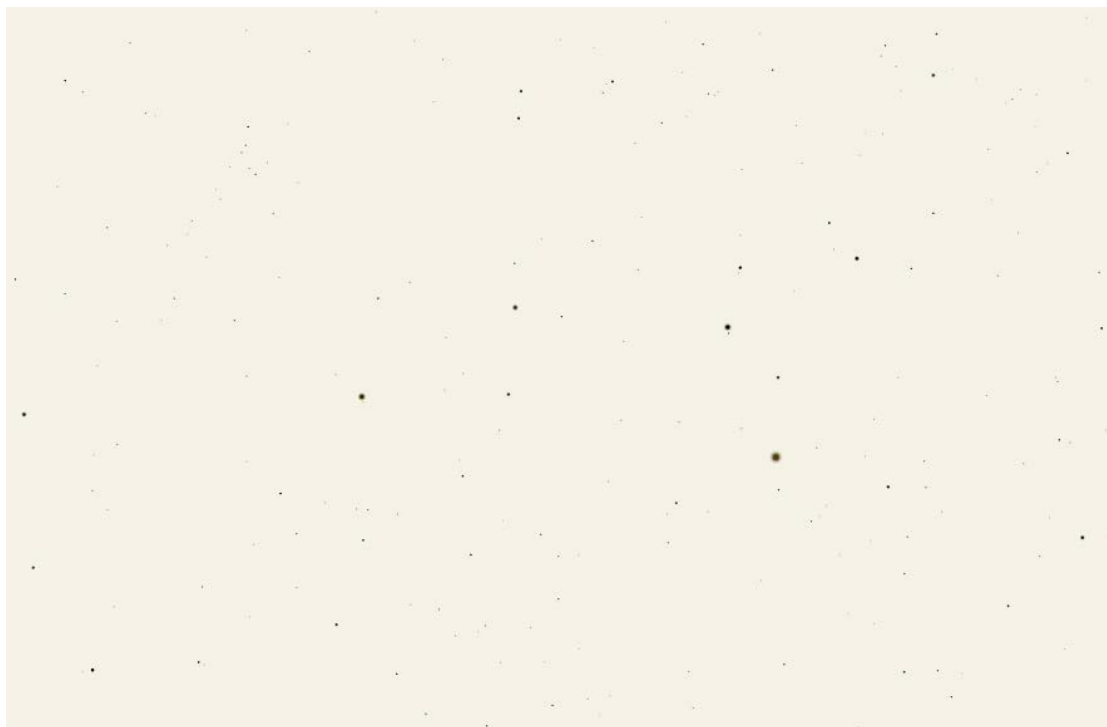
left to right: Bootes (partial), Corona Borealis (full), Hercules (full) and Lyra (partial)



left to right: Auriga (full) and Gemini (partial)



Canis Major (full)



Leo (full)

Part 2: Night Sky Identification (90 points)

There are a total of 3 questions, with increasing difficulty. Question 1 is worth **15 points**, Question 2 is **30 points** and lastly **45 points** for Question 3. You are to identify as many constellations – name, shape and their alpha star, deep sky objects, bright stars with common names, planets (if any) you can possibly find in each question/diagram. Note that top scores for each section will be rescaled to full credit.

1. DSOs (4 point per correct name and location)
2. Constellation shape (up to 3 points)
3. Common asterisms (2 points)
4. Constellation name (2 points)
5. Brightest star (1 point)
6. Planets if any (2 points)



Earth, Singapore, 83m FOV 95° 59.7 FPS 2017-10-28 00:12:12 UTC+08:00

