



Planetarium Round

Good Luck and Clear Skies!

General Instructions

1. The **Planetarium Round** consists of 2 questions on naked eye observations.
The total duration for this round is **45 minutes**.
2. After you take your seat inside the planetarium dome, the planetarium round will start. The time budget is as follows:
 - **10 minutes:** Read instructions and questions.
 - **5 minutes:** Dark adaptation / Familiarize with Sky 1.
 - **15 minutes:** Question 1. Invigilator will use laser pointer for part (e) in the last 3 minutes.
 - **15 minutes:** Question 2. Invigilator will use laser pointer in the first 3 minutes.

The invigilator will inform you of the time every 5 minutes. You are advised to pay attention.

3. At any time during the examination, you may stand up at your place or turn around. However, moving out of your place is strictly forbidden. Please maintain silence throughout the examination.
4. **DO NOT** shine your torch at the dome or towards other contestants.
5. Write your answers in the box provided.
6. The mark distribution is as follows:

Question	Subpart	Marks Acquired	Marks
1	a		5
	b		5
	c		3
	d		5
	e		3
2	a		6
	b		3
	c		5
Total			35

Name

IC Number

1. (Terrestrial Observation)

You are currently located in an unknown location on Earth. It is currently midnight.

- (a) Determine the latitude of the unknown location. Give your answer to the accuracy of 1 degree.

Answer:

- (b) Determine the current sidereal time. Give your answer to the accuracy of 30 minutes.

Answer:

- (c) In which month would these constellations be visible at midnight?

Answer:

- (d) Are there planets in the sky? Write the number of planets, and the constellations they are located in, in the box below.

Answer:

- (e) The invigilator will now point to 3 stars from North to South. Which star is closest to the celestial equator?

Answer:

2. (Lunar Observation)

You are now teleported and time-travelled to the Moon. The invigilator will now point to you the Earth and the Sun.

- (a) What is the lunar age (days since New Moon)? Give your answer to the accuracy of a day.

Answer:

- (b) In what month should this observation be in?

Answer:

- (c) There are a few bright stars visible. Name the 3 brightest stars visible.

Answer: