

OP01 (45 points)

a) (5 points)

Marking Scheme	Point
Capricornus/Cap	5

b) (5 points)

Marking Scheme	Point
Aquila/Aql	5

c) (14 points)

Marking Scheme	Point
Aries/Ari ☐ Taurus/Tau ☒ Gemini/Gem ☒ Cancer/Cnc ☐ Leo ☐ Virgo/Vir ☐ Libra/Lib ☐ Ophiuchus/Oph ☐ Scorpius/Sco ☐ Sagittarius/Sgr ☐ <u>Capricornus/Cap</u> ☒ Aquarius/Aqr ☒ Pisces/Psc ☒ Orion/Ori ☐ Auriga/Aur ☐ Cetus/Cet ☐ <i>+2 points for each correct answer.</i> <i>+1 point for checking all correct answers.</i> <i>-1 point for each incorrect or excess answer.</i>	11
Mercury is at Capricornus (underlined)	3

d) (16 points)

Marking Scheme	Point
Hamal/α Ari ☐ Menkalinan/β Aur ☒ Mirach/β And ☒ Alhena/γ Gem ☐ Diphda/β Cet ☐ Schedar/α Cas ☒ Menkar/α Cet ☒ Sadalmelik/α Aqr ☐ Alderamin/α Cep ☐ Scheat/β Peg ☒ Algol/β Per ☐ Sadr/γ Cyg ☒ Ankaa/α Phe ☐ Rigel/β Ori ☒ Fomalhaut/α PsA ☐ <i>+2 points for each correct answer.</i> <i>+2 point for checking all correct answers.</i> <i>-2 point for each incorrect or excess answer.</i>	16

e) (5 points)

Marking Scheme	Point
16h00	
Within ± 30 m	5
Outside this range but within ± 60 m	2

OP02 (15 point)

a) (5 points)

Marking Scheme	Point
1/6	
Within ± 2 days	5
Outside this range but within ± 5 days	2

b) (5 points)

Marking Scheme	Point
2/5	
Within ± 3 days	5
Outside this range but within ± 5 days	2

c) (5 points)

Marking Scheme	Point
30° <i>Note: Adjust this value based on the previous answer, using a rate of ± 1 degree per day.</i>	
Within $\pm 5^\circ$	5
Outside this range but within $\pm 10^\circ$	2

OP03 (15 points)

a) (5 points)

Marking Scheme	Point
Sagittarius/Sgr	5

b) (5 points)

Marking Scheme	Point
Virgo/Vir	5

c) (5 points)

Marking Scheme	Point
Negative sign	3
$h = -(90^\circ - 45.4^\circ) = -44.6^\circ$.	2