International Olympiad of Astronomy and Space Sciences for Juniors
România– Câmpulung Moldovenesc
October 31 – November 7 2022

ID Student:	
SERIA NO:	
STATION NO:	
Start time	

The answers will be given in the given spaces.

Working time: 30 minutes of which 5 minutes accommodation with the subjects.

NIGHT OBSERVATION ROUND

You have at your disposal: Newtonian telescope with EQ5 mount, with the diameter of the main mirror of 200 mm, focal length of 1000 mm; 25 mm eyepiece and 10 mm eyepiece.

A. Observations with the naked eye.

1. Estimate the sidereal time at the start of the test, with an error of ±10 minutes.

Answer	

2. Find the angular distance with an error of ± 3 degrees between:
(αPer_ Mirfak and βAnd_ Mirach)
(βCas_Caph and γCyg_Sadar)

Answer(αPer_ Mirfak and βAnd_ Mirach)	
Answer (βCas_Caph and γCyg_Sadar)	

3. Specify two constellations located at the meridian, specify the type of culmination and the alpha star.

	Constellation at meridian	Type of culmination	Alpha star
Answer			
Answer			

4. Estimate with an error of ±10 minutes the right ascension of the planet Jupiter.

Answer	

5. Estimate, for the star βARI_Sheratan, the apparent magnitude (error of ±0.4), declination (error of ±3 degrees) and right ascension (±10 minutes)

	apparent magnitude (±0.4 error)	declination (±3 degree error)	right ascension (±10 minutes)
Answer			

B. Observations using the astronomical telescope.

1. Point the telescope towards the beta star βCyg. Specify the type of star.

	Correct positioning		Star type
Answer	Yes	Not	

2. Point the telescope towards Messier M45 (which constellation it is in and what it is).

	Correct positioning		The constellation in which it is located	Type
Answer	Yes	Not		

3. Point the telescope towards the planet Jupiter, using the eyepiece with the focal length 25 mm. Make a drawing of what you observe through the telescope, and identify the Galilean satellites that can be seen through the eyepiece with a focal length 10 mm.

Answer Correct positioning	Yes	Not
Answer Drawing and identification Galilean satellites		