OBSERVATIONAL TEST PLANETARIUM

Inside the dome

1) The inside the dome is consisted of **3 questions** and takes 50 minutes.
2) When you enter the dome, you will be directed to your seat. Here you will find a clipboard with your answer sheet attached, and a red flashlight.
3) Fill in the box your student ID
4) PAY ATTENTION TO THE ASSISTANTS, and follow their indications.
5) If you have any questions, feel free to ask. They will answer to all your questions, except to the test questions
6) The timing is as follows:
   a) **10 minutes for your eye accommodation to the darkness;**
   b) **20 minutes for the first question;**
   c) **10 minutes for the second question;**
   d) **10 minutes for the third question;**
7) When you leave the dome, leave everything on your seat.
8) PLEASE WRITE ONLY ON THE PRINTED SIDE OF THE PAPER SHEET. DON'T USE THE REVERSE SIDE. ***The jury will not consider what is written on the reverse side of the answer sheet.***
9) Always pay attention to the assistant. During the test please be quiet. Point the flashlight only to your papers.

GOOD LUCK!

OBSERVATIONAL ROUND

PLANETARIUM

Answer sheet

STUDENT ID	

Please write ONLY on this side of the paper

Question 1

In the dome will be projected the sky in Suceava Long 26^0, in a on a certain date (of year) at 23:55 local time.

Two dashed arcs of different lengths, representing different degrees, will be projected onto the Dom.

10 minutes – relax and familiarize your eyes with the darkness. During this time don't use the flash light.

20 minutes – **Question 1**

a. Identify each arc and calculate the length in degrees of the segments:

Arc name		**segment length**	
Arc name		**segment length**	

b. Estimate the local sidereal time of the sky you see in the dome. The allowed error is 15 minutes.

$\theta_{sidereal}$	

c. Determine the month in which you can see the sky projected in the dome. Fill in the box the number of the month (1 - January to 12 - December)

Month number	

d. Which meteoric shower is the most important in the month of the planetarium sky. What is the constellation where its radiant is?

After you identify the name of the meteoric shower, use the table 1 to find the letter associated to it. Fill in the box this letter.

After you identify the constellation, use the table 2, find the IAU abbreviation of it and write it down in the appropriate box

The letter which identify the meteoric shower	
IAU abbreviation of the radiant constellation	

e. Estimate Right ascension and declination for: Capela (α Aur), Aldebaran (α Tau).

Capela (α Aur)	Right ascension (RA)	
	Declination (δ)	
Aldebaran (α Tau)	Right ascension (RA)	
	Declination (δ)	

Please write ONLY on this side of the paper

For **question 2 and 3** the assistant will use a small projector to point with a white small arrow some sky objects. Each object will be pointed **2 minutes.** Please pay attention to the assistant announcements.

Question 2 – 10 minutes

Three Messier objects will be pointed. For each messier object pointed fill in the boxes the number which indicates its type, as follows: **G for galaxy, N for nebula, OC for open cluster, GC for globular cluster.**

For each object fill in the appropriate box the IAU abbreviation of the constellation where the star is located, Use for that **table 2**

1st Messier object		Number which indicates the type		IAU abbreviation of the constellation	
2nd Messier object		Number which indicates the type		IAU abbreviation of the constellation	
3rd Messier object		Number which indicates the type		IAU abbreviation of the constellation	

Please write ONLY on this side of the paper

Question 3 - 10 minutes

Three stars will be pointed successively. Each star will be pointed 2 minutes. Fill in the appropriate box the name of the star, the number which indicates its type (**1 for single, 2 double, 3 for variable**) For each star fill in the appropriate box the IAU abbreviation of the constellation where the star is located, Use for that **table 2**

1st Star		Number which indicates the type		IAU abbreviation of the constellation	
2nd Star		Number which indicates the type		IAU abbreviation of the constellation	
3rd Star		Number which indicates the type		IAU abbreviation of the constellation	

Verify if you have written your student ID. Put the clipboard with the answer sheets attached and the flashlight on your seat and leave the dome.