

Observation Examination

Telescope Round

Instructions

- You are given an envelope marked **[B]**. Please verify the Contestant Code printed on it.
 - The Question Paper, a Sky Map, and Summary Answersheets are kept inside the smaller envelope **[S]**. **You are allowed to open this envelope ([S]) only when the whistle is blown to mark the start of the examination.** The exam time (1 hour) starts from this point.
 - **Setup:**
 - You are assigned one telescope “station”, where you will find a six-inch Newtonian telescope with equatorial (EQ3) mount. You must always remain in the vicinity of your telescope during the exam.
 - The telescope is balanced along both the axes and is also polar-aligned. There is no finder scope attached to the telescope.
 - There is a large projection screen mounted near the ceiling diagonally across the hall. During the exam, you have to point your telescope at this screen.
 - At the station, there is a writing board and an Equipment Box placed beside the telescope, containing the following items:
 1. Two eyepieces: 25 mm and 10 mm (with crosshair)
 2. A head torch
 3. A green pen
 4. A stopwatch
- You should leave these items at the station after use.**
- An Examiner is assigned to your telescope station. Please provide your Contestant Code to the Examiner for verification.
 - The flow of the exam will be as follows:

Lights ON	20 min	Question reading and planning observations – At the Table
Lights OFF:	25 min	Projection Sequence – At the Telescope
Time (min:sec)	Duration	Projection
00:00 – 01:10	70 sec	Welcome message (Use to point the telescope)
01:10 – 03:10	2 min	Sample Sky (for darkness adaptation, pointing and focusing)
03:10 – 03:20	10 sec	Countdown for Question OT01
03:20 – 09:20	6 min	Sky for Question OT01
09:20 – 09:40	20 sec	Blurred image (You should move away from the telescope)
09:40 – 10:40	1 min	Evaluation time for the Examiner for Question OT01
10:40 – 14:40	4 min	Break (You may continue working on your sheet)
14:40 – 15:00	20 sec	Countdown for Question OT02
15:00 – 25:00	10 min	6 runs of Question OT02
Lights ON	15 min	Calculations and finalization – At the Table

- At the start of the exam, you will have 19 minutes to read the question paper, and make any preliminary plans for your observation. During this time, lights in the hall will be on. At the end of this time, a whistle will be blown, and you must leave the table and approach the telescope.
- For the next 1 minute, you are expected to familiarize yourself with the contents of the Equipment Box, and the telescope, but **you are not allowed to change its orientation from the zenith pointing.**

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- At the 20th minute, the whistle will blow again and the hall will go dark. You can now begin your observations with the telescope. The hall will remain dark for the next 25 minutes. During this time you will see different projections on the screen.
- The Examiner will **not** help you in any way during the first question (OT01) to orient or point the telescope towards the screen.
- In the first question (OT01), you have to point at a certain object on the screen using the telescope. After 6 minutes, the screen will be blurred for 20 seconds during which you must move away from the telescope.
- After 20 seconds, the sky projection will be restored to exactly the same view as before. The Examiner will now check the pointing.
- At the end of the first question, there will be a break for 4 minutes. **If you were unable to point the telescope correctly for the first question, you may use this time to point the telescope to the screen. Alternatively, you can ask the Examiner to point the telescope at the screen for the second question at the beginning of the break. This, however, will have a penalty of 1 mark.**
- At the end of Question OT02, the lights in the hall will be switched on and you should go back to the table. You will have 15 minutes to finish your calculations.

• **At the end of the examination:**

- Check that you have correctly written your Contestant Code and page numbers on all used sheets.
- Arrange your sheets in the following order:
Summary Answersheet of (OT01), the sky map Map-OT01, Working Sheet(s) used for (OT01), Summary Answersheet of (OT02), Working Sheet(s) used for (OT02).
- Place the bunch of the above sheets inside the smaller envelope S. Both Summary Answersheets must be placed inside the envelope S irrespective of whether you have used them or not.
- **Only the contents of the smaller envelope S will be evaluated. Any sheet that is not placed inside this envelope will not be evaluated.**
- Place the smaller envelope S inside the bigger envelope B.
- All other sheets, namely, Instruction Sheet(s), Question Paper(s), Data Sheet(s) and unused Working Sheet(s) should be placed directly inside the bigger envelope B.
- Tie the thread seal on the envelope B.
- Hand over the envelope B to the examiner. Make sure that no sheet is left on the table.