When you arrive at your observing station, **DO NOT** disturb the telescope before attempting the first question (OT1).

(OT1) The telescope is already set to a deep sky object. Identify the object and tick the correct box in the Summary Answersheet. **10**

Note: You can use any technique to identify the object. However, if you disturb the telescope, you will **NOT** be helped to bring it back to the original position.

(OT2)

(OT2.1) Point the telescope to M45. Show the object to the examiner. **5**

Note: 1. After 5 minutes, 1 mark will be deducted for a delay of every minute (or part thereof) in pointing the telescope.

2. You have a single chance to be evaluated. If your pointing is incorrect the examiner will change the pointing to M45 for the next part of the question.

(OT2.2) Your Summary Answersheet shows telescopic field of M45. In the image, seven (7) brightest stars of the cluster are replaced by '+' sign. Compare the image with the field you see in the telescope and number the '+' marks from 1 to 7 in the order of decreasing brightness (brightest is 1 and faintest is 7) of the corresponding stars. **15**

(OT3) The examiner will give you a moon filter, an eyepiece with a cross-wire and a stopwatch. Point the telescope towards the Moon. Attach the filter to the telescope. On the surface of the Moon, you will see several "seas" (maria) which are nearly circular in shape. Estimate the diameter of Mare Serenitatis, D_{MSr}, labelled as "1" in the figure below, as a fraction of the lunar diameter, D_{Moon}, by measuring the telescope drift times, t_{Moon} and t_{MSr}, for the Moon and the mare, respectively. **20**

