

Q13 A shock wave acts on a GMC complex, and one result is that a diffuse cloud within the complex is compressed, with negligible heating, into a dense cloud. The key lists possible changes that the cloud will gradually undergo in its new, denser form. Which *two* of these changes are *unlikely* to occur? You can assume that there are some young stars not very far from the cloud. Pencil across *two* cells in row 13.

KEY for Q13

A The cloud will cool slightly.

- B A greater fraction of the hydrogen will combine into molecular form.
- C The abundance of molecules will increase.
- D Larger molecules will appear.
- E The degree of ionization will decrease slightly.
- F The number of dust grains will increase greatly.
- G A typical dust grain will grow in size, mainly by acquiring an icy mantle.
- H The cloud will become opaque to cosmic rays.

PART C : FEEDBACK QUESTIONS – BLOCK 1 (Not assessed)

This Part contains questions designed to help the S281 Course Team evaluate the Course and improve it for the future. These questions do not carry any marks for this assignment, but if you can spare a few minutes to answer them, we would be very grateful.

Q14 Please estimate your total study time for *Preparatory Science*, and select *one* answer from A to D in the key. How useful did you find it? Select *one* answer from E to G in the key. Pencil across *two* cells in row 14.

KEY for Q14

- A Less than 2 hours
B 2–4 hours
C 4–6 hours
D More than 6 hours
E Very useful
F Fairly useful
G Not at all useful

Q15 to Q19 These questions refer to Book 1. Each question refers to one of the Chapters of Book 1, and asks about the length of time you took to study it and how interesting you found it.

Q15 Please estimate your total study time for Chapter 1 (including any assignment questions, video sequence 2 and TV programme 1) and select *one* answer from A to E in the key. What was your overall impression of the Chapter? Was it interesting? Select *one* answer from F to H in the key. Pencil across *two* cells in row 15.

Q16 Please estimate your total study time for Chapter 2 (including any assignment questions) and select *one* answer from A to E in the key. What was your overall impression of the Chapter? Was it interesting? Select *one* answer from F to H in the key. Pencil across *two* cells in row 16.

Q17 Please estimate your total study time for Chapter 3 (including any assignment questions, video sequences 3 and 4 and audio band 1) and select *one* answer from A to E in the key. What was your overall impression of the Chapter? Was it interesting? Select *one* answer from F to H in the key. Pencil across *two* cells in row 17.

Q18 Please estimate your total study time for Chapter 4 (including any assignment questions and TV programme 2) and select *one* answer from A to E in the key. What was your overall impression of the Chapter? Was it interesting? Select *one* answer from F to H in the key. Pencil across *two* cells in row 18.

Q19 Please estimate your total study time for Chapter 5 (including TV programme 3) and select *one* answer from A to D in the key. What was your overall impression of the Chapter? Was it interesting? Select *one* answer from E to G in the key. Pencil across *two* cells in row 19.

KEY for Q15 to 19

- A Less than 6 hours
B 6–9 hours
C 9–12 hours
D 12–15 hours
E More than 15 hours
F Very interesting
G Fairly interesting
H Not very interesting

Q20 to Q24 These questions ask about the level of difficulty of Chapters 1 to 5 in Book 1. For each question, select *one* response from the key according to how difficult you found the relevant Chapter.

Q20 I found Chapter 1...

Q21 I found Chapter 2...

Q22 I found Chapter 3...

Q23 I found Chapter 4...

Q24 I found Chapter 5...

KEY for Q20 to Q24

- A ...too easy because there were insufficient challenging concepts in this Chapter.
B ...too easy because the Chapter took less than a reasonable time.
C ...about right in level.
D ...too difficult to understand in a reasonable time.
E ...too difficult to understand even using more than a reasonable time.

Q25 to Q28 These questions ask about the video sequences related to Block 1. You are asked to estimate how long you spent watching the video sequence, reading the notes and doing any tasks required. Select *one* answer from A to E in the key. How useful did you find the video sequence? Select *one* response from F to H in the key. For each question, pencil across *up to two* cells in the appropriate row.

Q25 Relates to video sequence 1. Pencil across *up to two* cells in row 25.

Q26 Relates to video sequence 2. Pencil across *up to two* cells in row 26.