

**QUESTION 1**

Study the micrographs A to H that show meiotic cell division in human cells. Use your knowledge on the phases of meiosis and answer the questions that follow.

**Micrograph A**

- 1.1. Name **TWO** places in the human body where this cell will be found. (2)

---

---

- 1.2. How many chromosomes will there be in a human cell like Micrograph A at the start of meiosis? (1)

---

- 1.3. How many sets of DNA will there be in a human cell like Micrograph A at the start of meiosis? (1)

---

**Micrograph B**

- 1.4. Identify the phase of meiosis represented by Micrograph B. (1)

---

- 1.5. Give **ONE** visible reason for your answer in QUESTION 1.4. (2)

---

---

---

- 1.6. Draw a complete, labelled line diagram of this phase of meiosis in the space provided. Assume the cells has a diploid number of 6. (6)



### **Micrograph C**

- 1.7. What happens to the chromosomes during this phase of meiosis? (2)

---

---

---

### **Micrograph D**

- 1.8. Identify the phases of meiosis represented by Micrograph D. (1)

---

- 1.9. In this human cell, how many chromosomes will be present in each nucleus at the end of this phase? (1)

---

### **Micrograph E**

- 1.10. Identify the phase of meiosis represented by Micrograph E. (1)

---

- 1.11. Give **ONE** similarity between the chromosomes in the nuclei of this micrograph and the nuclei of Micrograph A. (1)

---

---

---

- 1.12. Give **ONE** difference between the chromosomes in the nuclei of this micrograph and the nuclei of Micrograph A. (1)

---

---

---

### **Micrograph F**

- 1.13. Identify the phase of meiosis represented by Micrograph F. (1)

---

- 1.14. Give **ONE** visible reason for your answer in QUESTION 1.13. (2)

---

---

- 1.15. Give **ONE** way in which the chromosomes of Micrograph F differs from the chromosomes in Micrograph B. (2)

---

---

---

---

**Micrograph G**

1.16. Identify the phase of meiosis represented by Micrograph G. (1)

---

1.17. Give **TWO** visible reasons for your answer in QUESTION 1.16. (2)

---

---

---

---

**Micrograph H**

1.18. Give **ONE** difference between the chromosomes in the cells shown in Micrograph D and Micrograph H. (2)

---

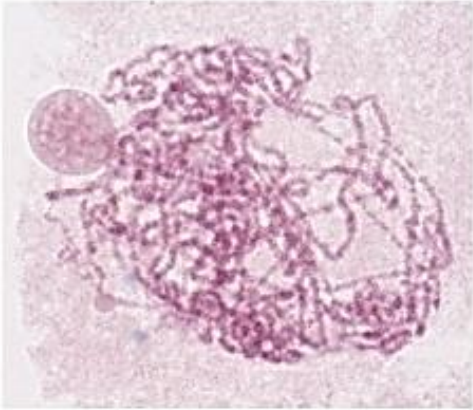
---

---

**TOTAL: [30]**

## Meiosis in the human body

A



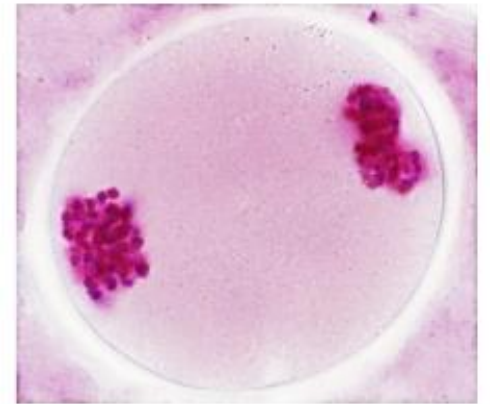
B



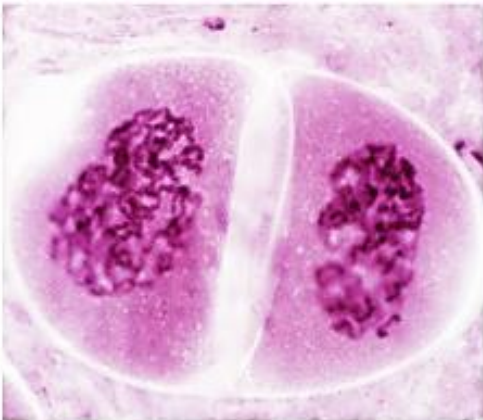
C



D



E



F



G



H

