



# ARJUNA NEET BATCH

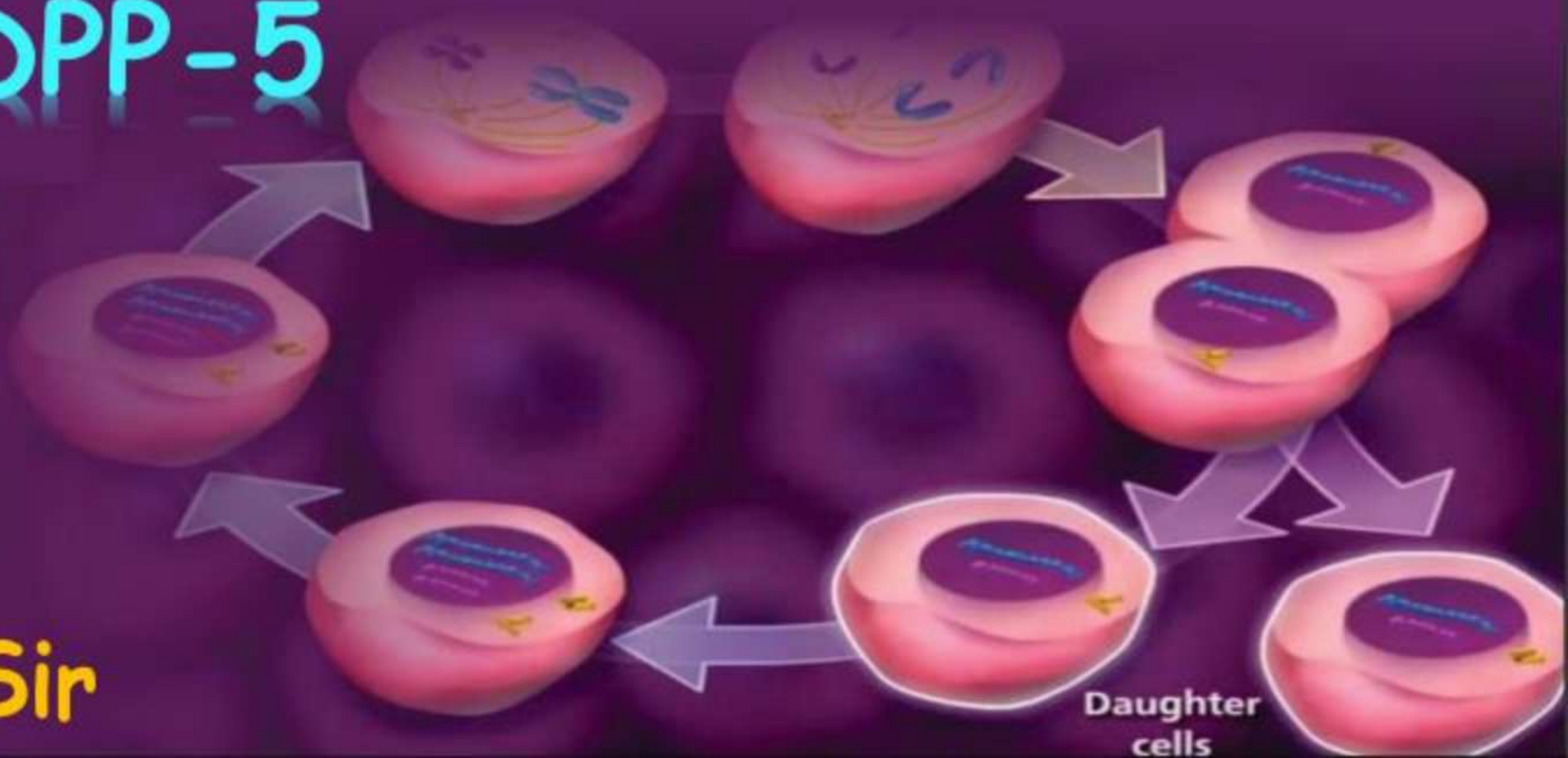


## CELL CYCLE AND CELL DIVISION

DPP-5



By : Biswajit Sir



**Q1. How many metaphasic plates are formed in metaphase I?**

A. 1

☒ B. 2

C. 4

D. Variable

<u>phases</u>	<u>no. of metaphasic plates</u>
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metaphase	→ 1
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meta I	→ 2
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meta II	→ 1
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**Q2. In which of the following phase chromosomes separate without any spilling of their centromeres?**

**A. Anaphase**

**B. Anaphase I**

**C. Anaphase II**

**D. metaphase**



**Q3. Which of the following separate in anaphase II?**

- A. ~~sister chromatids~~ → anaphase / ana II
- B. Homologous chromosomes → ana I
- C. Nonsister chromatids ✗
- D. Non homologous chromosomes ✗



**Q4. Which of the following cell division contribute towards evolution?**

A. Amitosis → ~~C.O.X~~

B. Mitosis → ~~C.O.X~~

☒ C. Meiosis

D. All of the above

evolution



Variation



genetic recomb<sup>n</sup>



crossing over



meiosis



- Q5. E coli divides by**
- A. Mitosis ✗
  - B. Meiosis ✗
  - ✓ C. Amitosis
  - D. All of the above

$E. coli$   
 $\downarrow$   
 $PK \rightarrow$  cell division  $\rightarrow$  Amitosis  
 $\downarrow$   
 mitosis ✗  
 meiosis ✗





**Q6. Which of the following event takes place in interkinesis?**

- A. DNA replication ✗
- B. ☒ Centrosome duplication ✓
- C. Condensation ✗ of chromosomes ✗
- D. More than one

↓  
phase b/w  
meiosis I and  
meiosis II

- No DNA repl<sup>n</sup>
- duplication of centrosome.





**Q7. Which of the following is a significance of meiosis?**

A. Growth → mitosis

B. Repair → mitosis

☒ C. Variation → meiosis

D. Restore karyocytoplasmic ratio

↳ mitosis

↳ variation

- maintenance of chromosome number
- gametogenesis

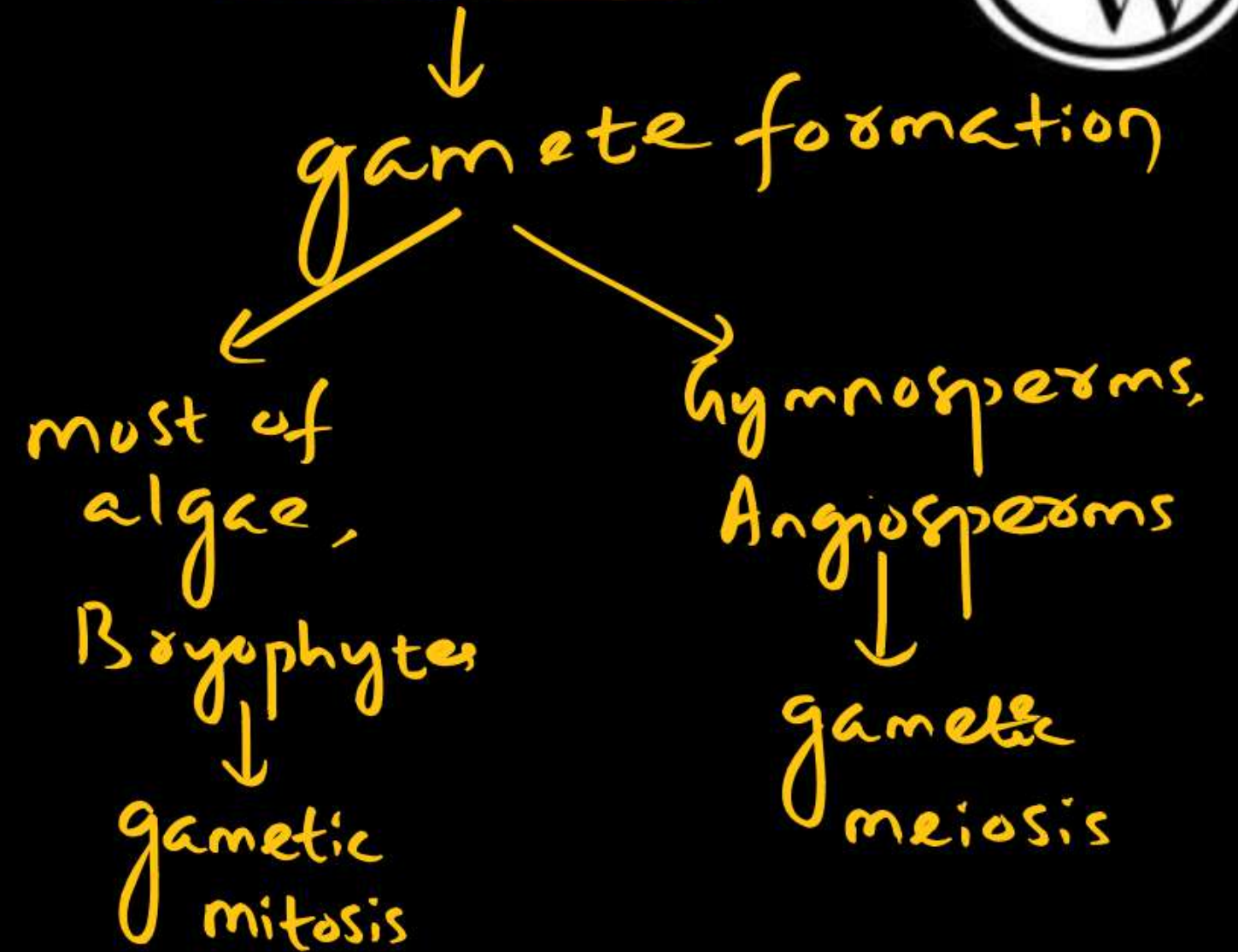






Q8. Which cell division is responsible for gametogenesis in angiosperms?

- A. Mitosis ✗
- B. Meiosis ✓
- C. Amitosis ✗
- D. Equational division ✗



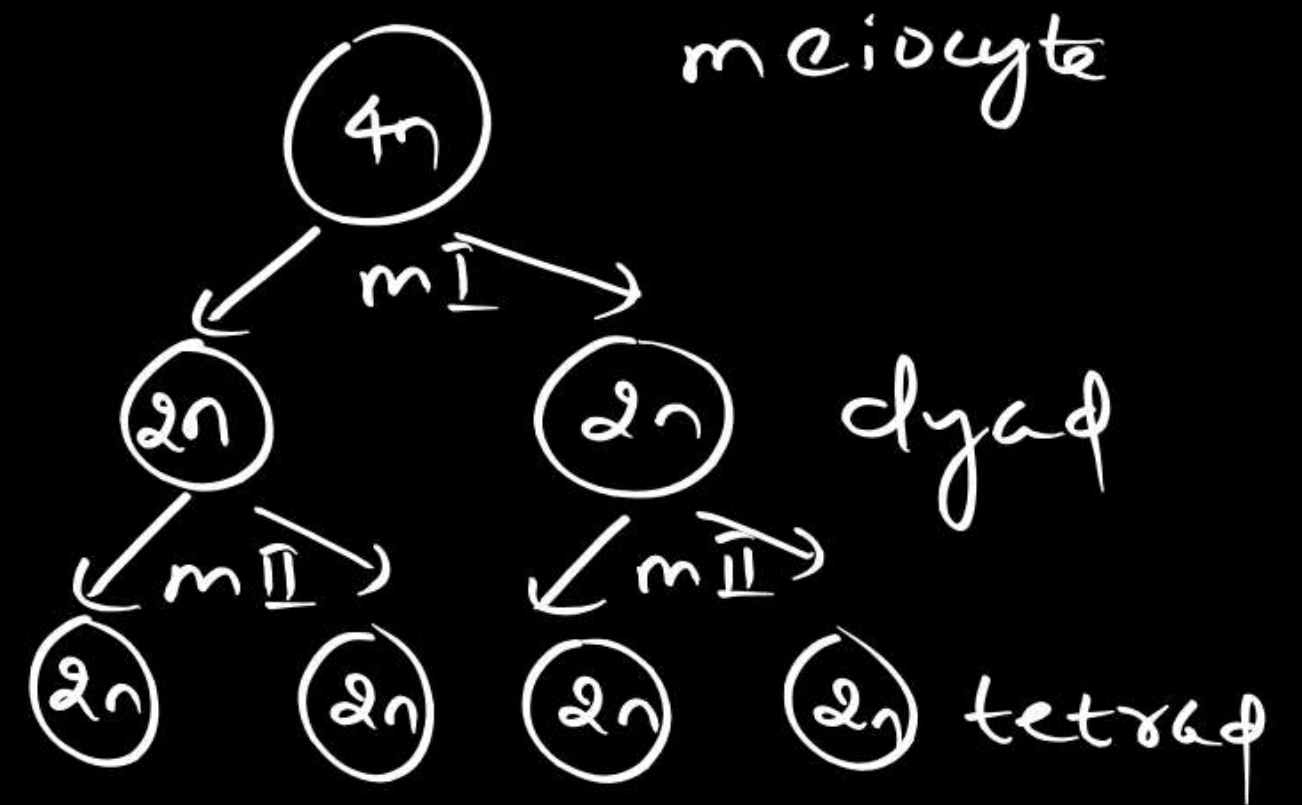
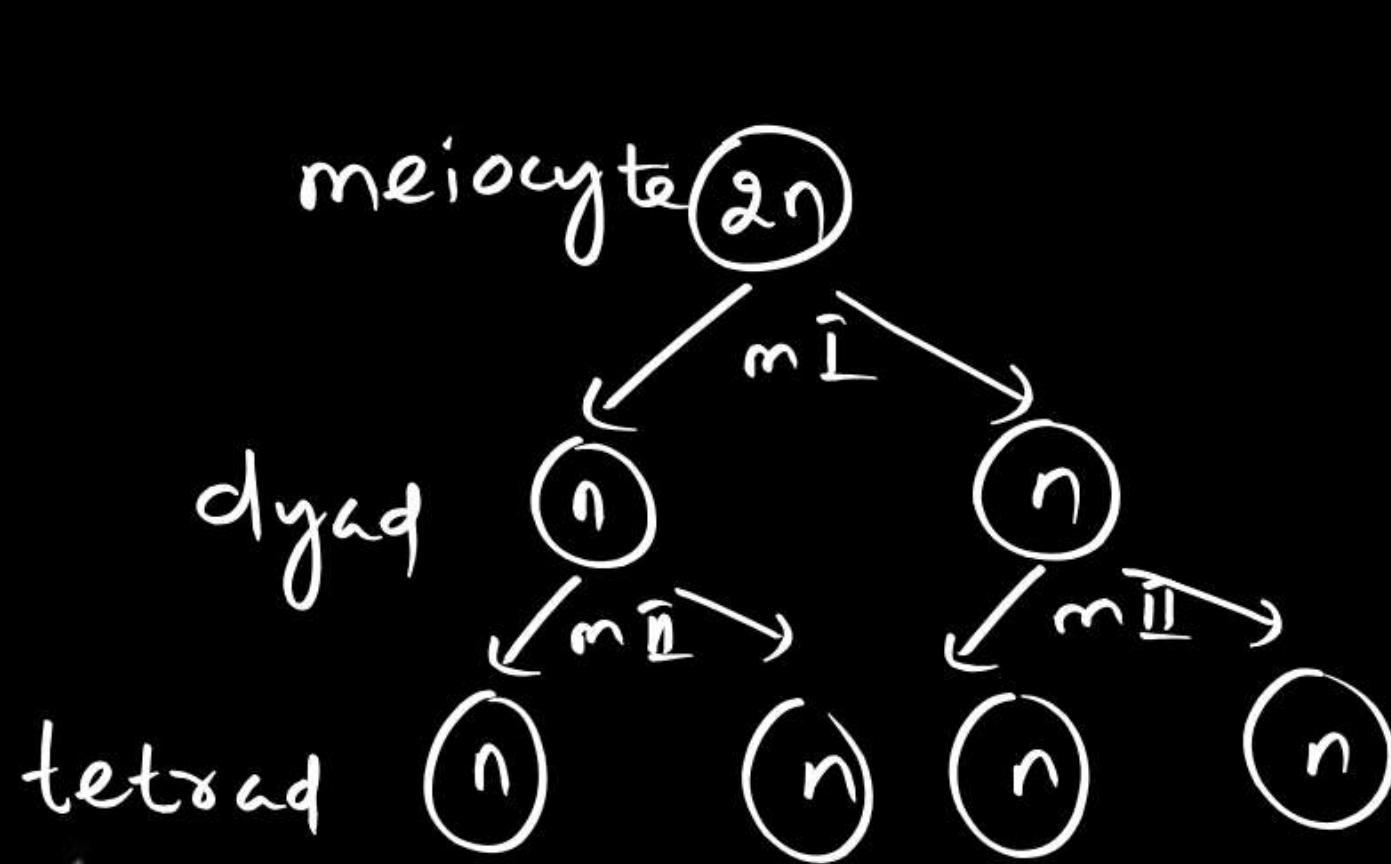
**Q9. What is the number of chromosomes in the end products of meiosis if meiocyte is  $4n$ ?**

A.  $n$

~~B.  $2n$~~

C.  $3n$

D.  $4n$





3c

Q10. If amount of DNA in endosperm cell of an angiosperm is 30 pico gram then what would be the amount of DNA in G2 phase in mitocyte in pico gram?

A. 15

C. 40

B. 30

D. 60

→ 2n

$$\begin{aligned} 3c &\rightarrow 30 \\ \therefore 4c &\rightarrow 40 \end{aligned} \quad G_2 \rightarrow \frac{2n}{4c}$$

endosperm cell  $\begin{cases} \frac{3n}{3c} \rightarrow \text{angiosperms} \\ \frac{n}{c} \rightarrow \text{gymnosperms} \end{cases}$







**Q11. Find out the odd one with respect to mitotic poison**

A. Auxin → mitogen  
C. Mustard gas ✓

B. Chalone ✓

D. Ribonuclease ✓

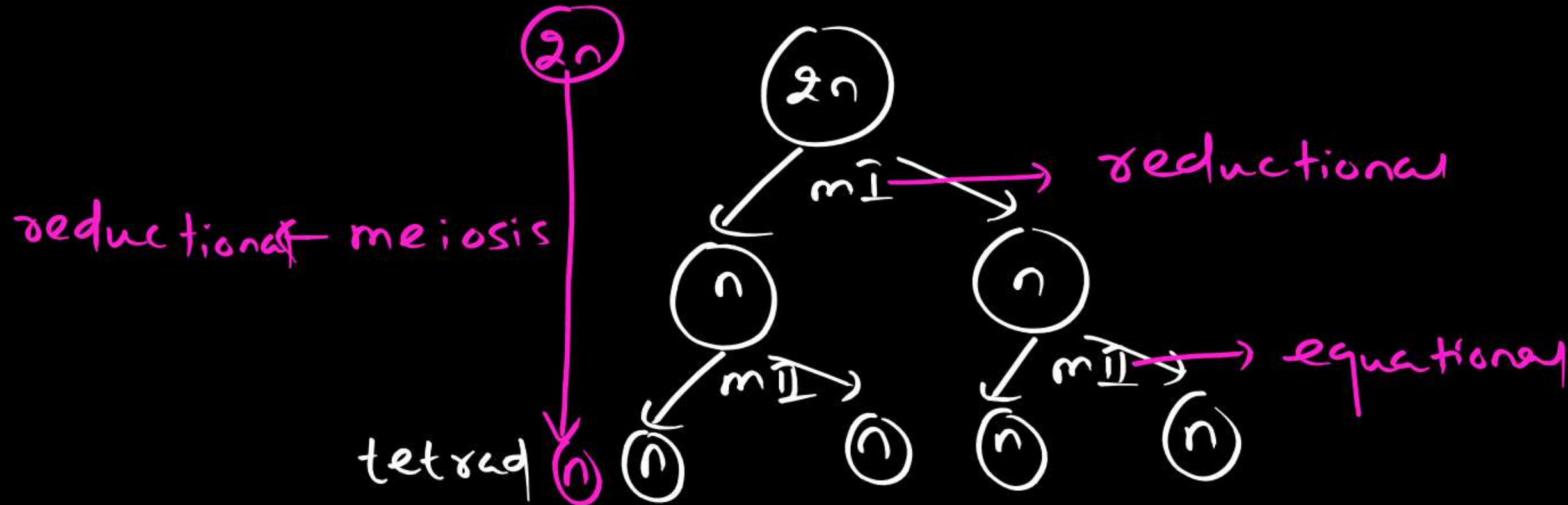
↓  
chemicals  
that inhibit  
cell div.



**Q12. Meiosis II is**

A. reductional ✗  
C. Both

B. Equational ✓  
D. None



**Q13. Which of the following shows zygotic meiosis?**

A. Angiosperm → *gametic meiosis*

B. Bryophytes → *zygotic meiosis*

C. Pteridophytes

☒ D. Most of algae → *zygotic meiosis*

↳ *zygotic meiosis*







Q14. Statement P: Gametes are ~~always~~ formed by Meiosis (F)  
Statement Q: Both Meiosis I and ~~Meiosis II~~ are reductional (F)  
Which of the above statement is true

A. P

B. Q

C. Both

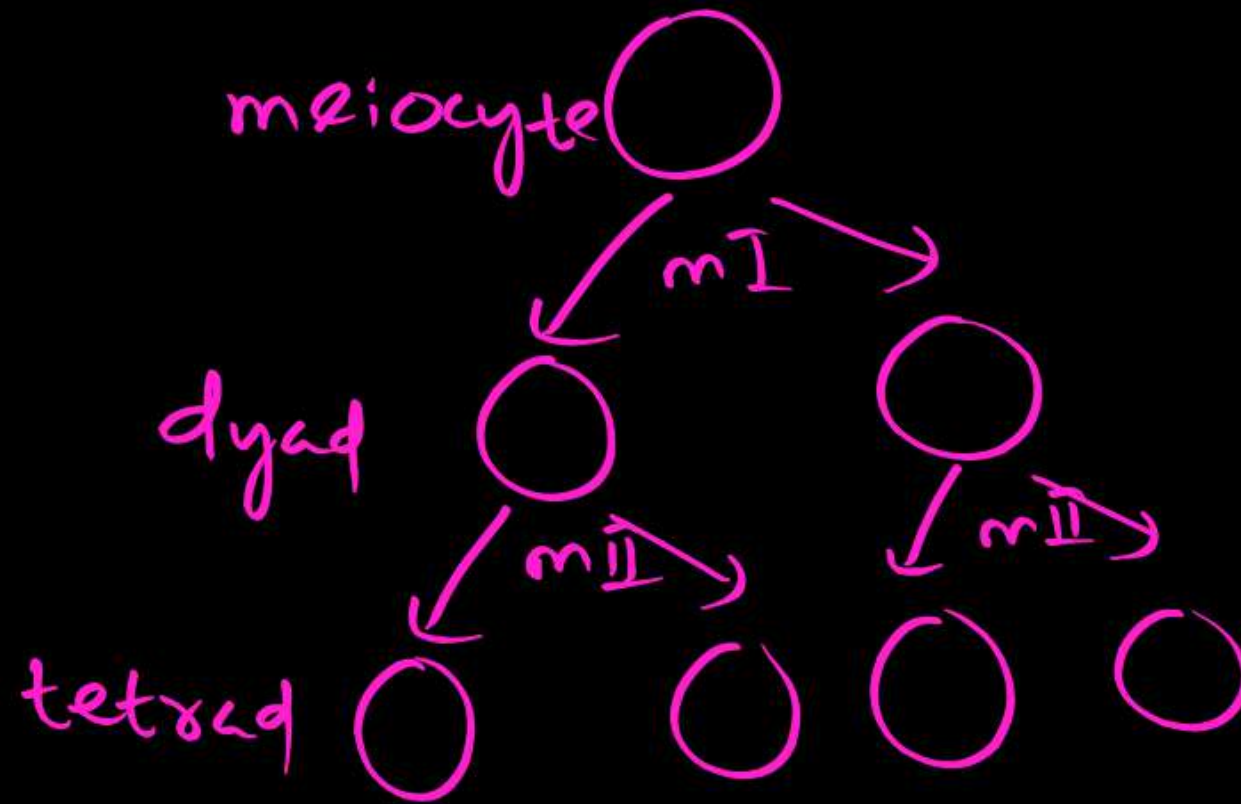
D. None



**Q15. The two daughter cells obtained after meiosis I are called**

A. Meiocyte  
C. Tetrad

☒ B. Dyad  
D. Gamete





*Thank You बहनों*

