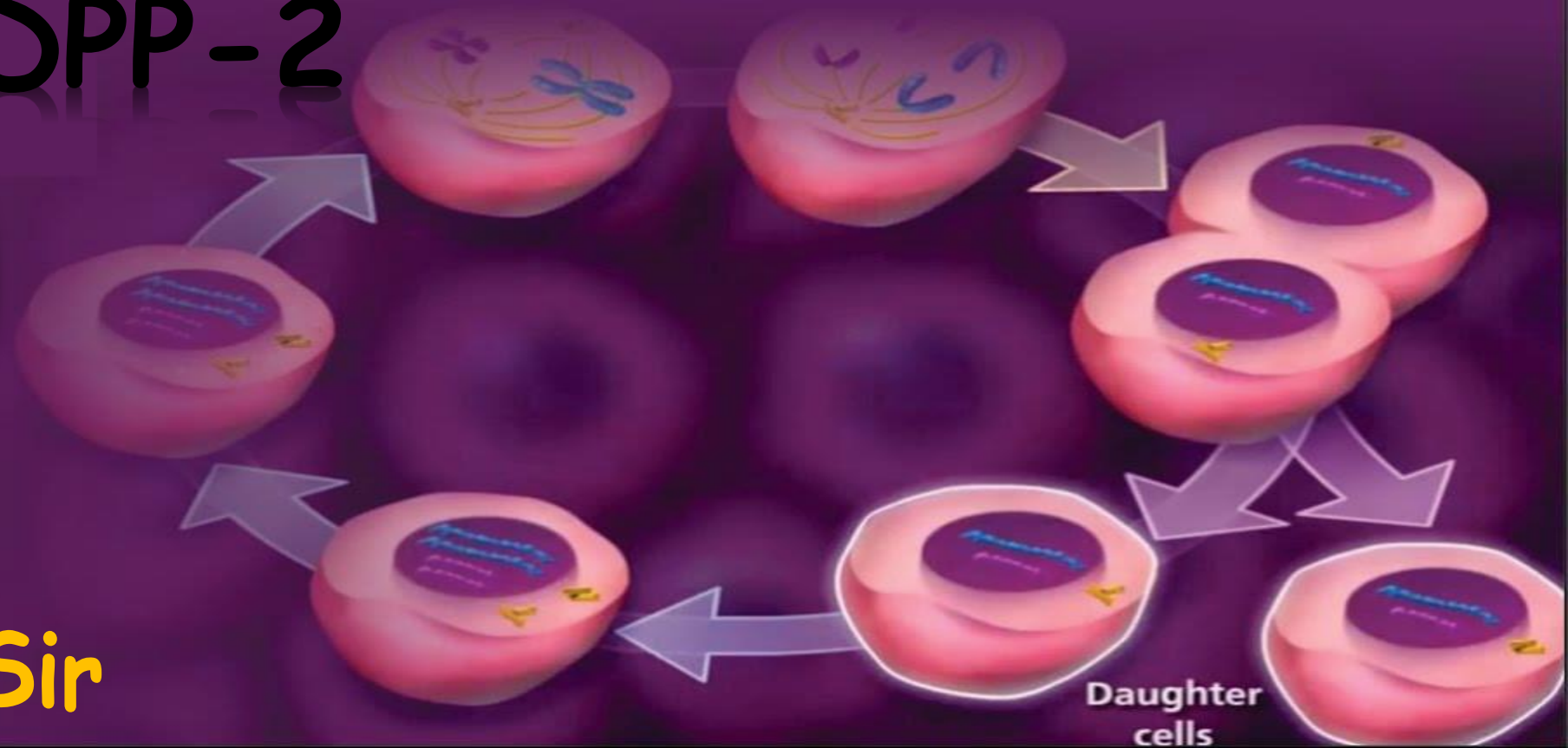
ARJUNA NEET BATCH

CELL CYCLE AND CELL DIVISION

DPP-2



By : Biswajit Sir

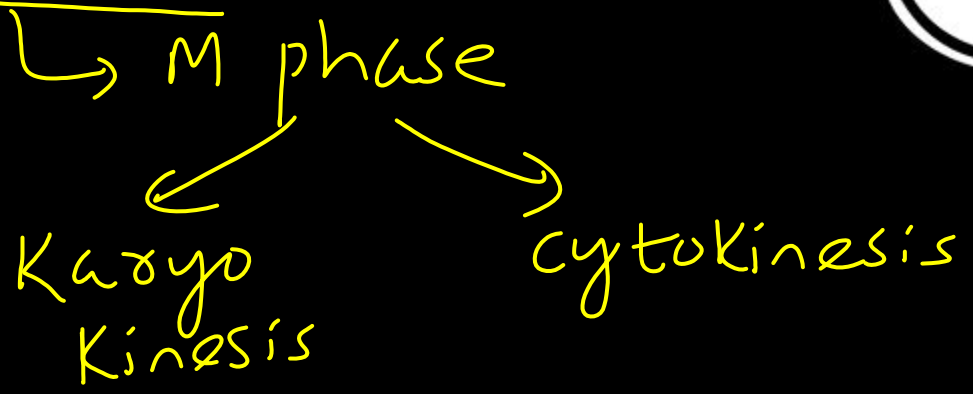
Q1. Find out the odd one w.r.t cell division proper

A. Karyokinesis (T)

B. Cytokinesis (T)

C. Quiescent stage (F)

D. More than one



→ M phase

Karyo Kinesis

cytokinesis

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Q2. In which phase of cell cycle genome gets duplicated?

A. G1 **B. G2**

C. S **D. Go**

→ DNA replication

↓

amount of DNA doubles

↓

genome duplicates

Q3. In which of the following phase number of chromosomes remain same but amount of DNA doubles?

A. G1

B. Quiescent stage (G_0)

C. Go

D. S

$G_1 \rightarrow \frac{2n}{2c}$

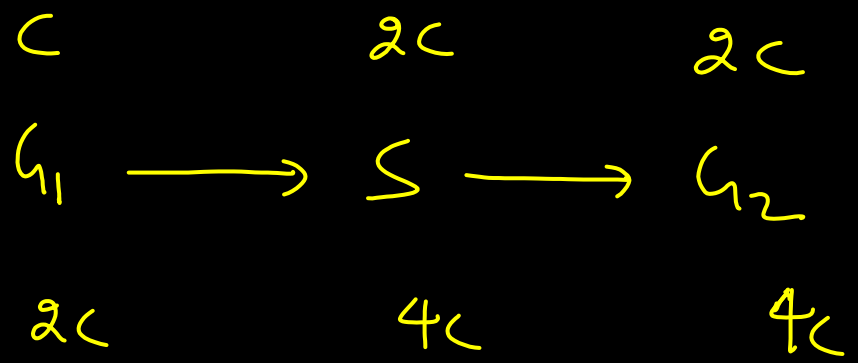
S $\rightarrow \frac{2n}{4c}$

Quiescent stage / $G_0 \rightarrow \frac{2n}{2c}$

Q4. If amount of DNA in a cell in G1 phase is C, then what will be the amount DNA in G2 phase?

A. C **B. 2C**

C. 3C **D. 4C**



Q5. In which phase of cell cycle maximum growth of cell take place?

A. G1

B. G2

C. S

D. M phase

Q6. Find out the odd one w.r.t interphase

A. Karyokinesis
B. Cytokinesis
C. Prophase
D. All of the above

G_1, S, G_2 (G_0)

Q7. In which phase of cell cycle the structure with cartwheel like appearance undergoes duplication?

A. S
B. G1
C. G2
D. M phase

cartwheel → centriole → duplicates in S phase

Q8. Nerve cell is in which phase of cell cycle

A. Go

B. G1

C. S

D. Can be in any phase of cell cycle

Terminally differentiated cell → G_0

(QC)

Q9. What does happen of a quiescent cell is provided with energy and mitogens?

A. Cell will divide ✓

B. Cell will not divide ✗

C. Karyokinesis will take place but not cytokinesis ✗

D. Cytokinesis will take place but not karyokinesis ✗

QC —mitogen, energy→ cell divides

cell divides → Karyo Kinesis, cytokinesis

Q10. Find out the odd one with respect to M phase

A. Prophase (T)

B. Metaphase (T)

C. Anaphase (T)

D. Quiescent stage (F)

↳ interphase

Karyokinesis

- → prophase
- → metaphase
- → Anaphase
- → Telophase.

Cytokinesis

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Q11. Cell in quiescent stage

A. Never divides

B. Always divides

C. Divides when required

D. Metabolically inactive

Q12. In which phase of cell cycle proteins required for DNA packing are synthesized?

A. G1

B. G2

C. S

D. M

histone

Synthesized in S phase.

Q13. In which phase of cell cycle the organelle involved in packaging of material show increase in its number?

A. G1

B. G2

C. S

D. M

Q14. How many rounds of mitotic generation (n) are required to produce 64 cell from a single cell?

A. 63
B. 32
C. 6
D. 64

$X = 2^n$

$64 = 2^n$

$\Rightarrow n = 6$

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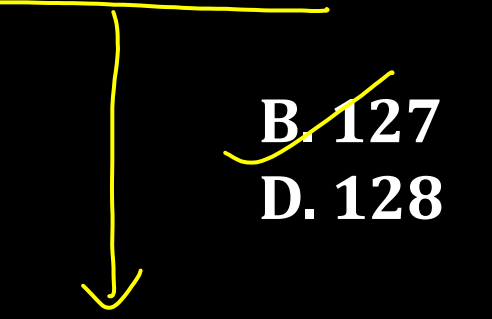
Q15. How many mitotic divisions are required to produce 128 cells from 1 cell?

A. 7

B. 127

C. 64

D. 128



$X-1$

$128-1=127$

Thank You बच्चों