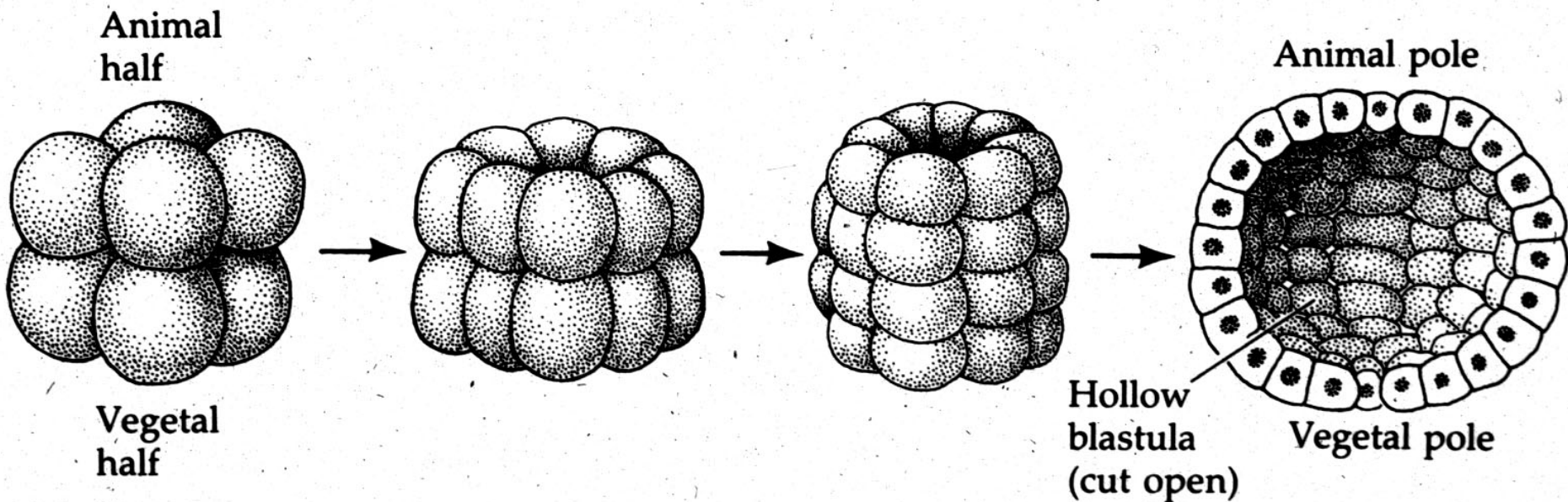
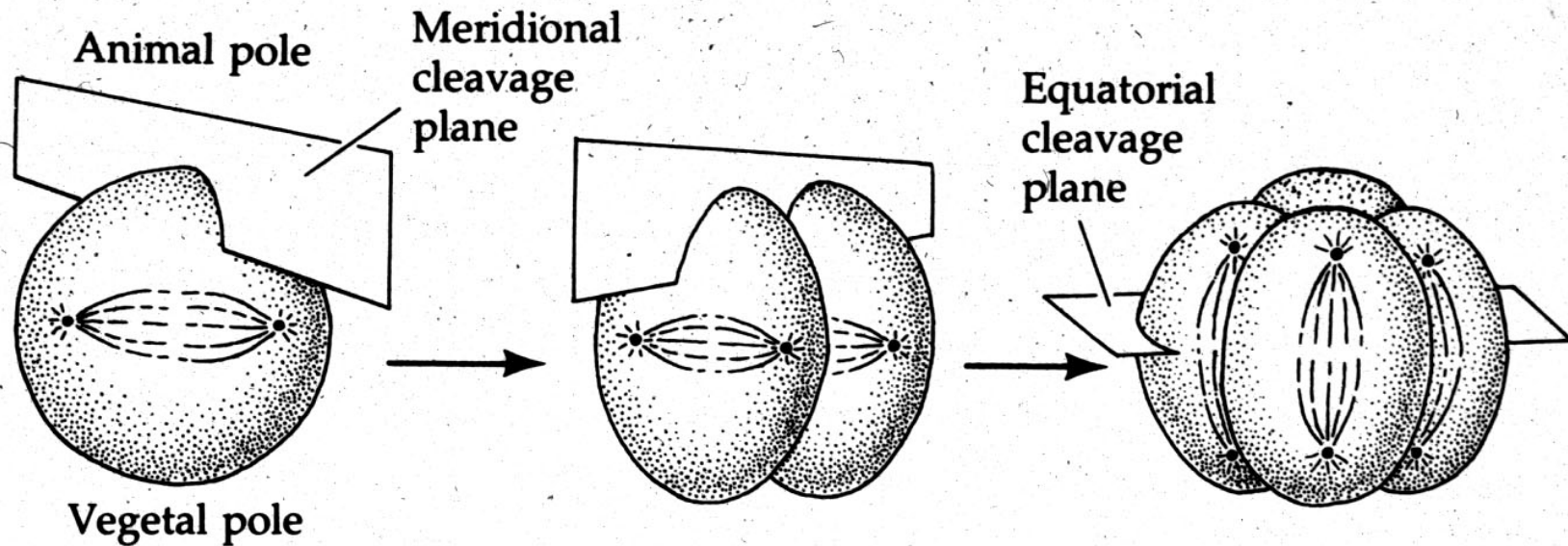
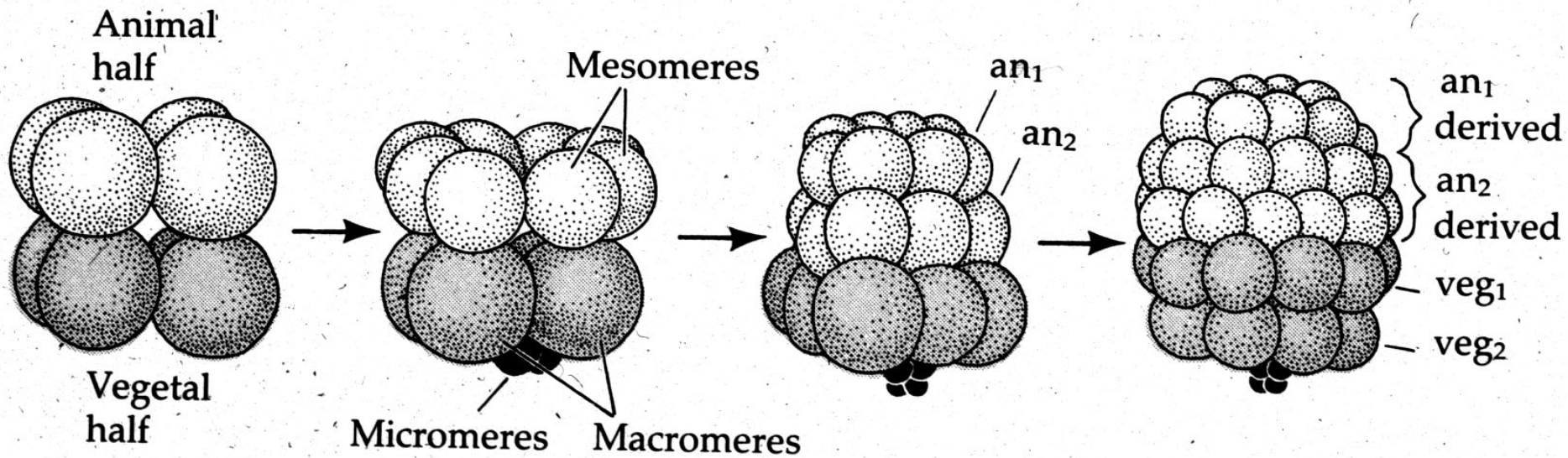
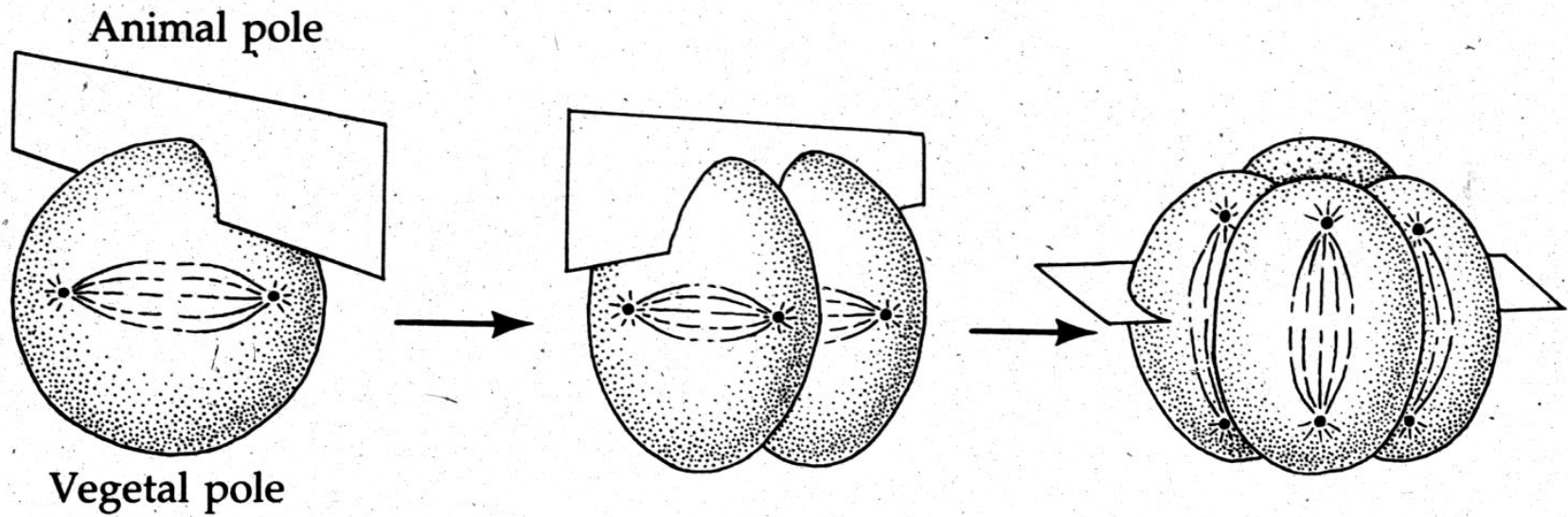
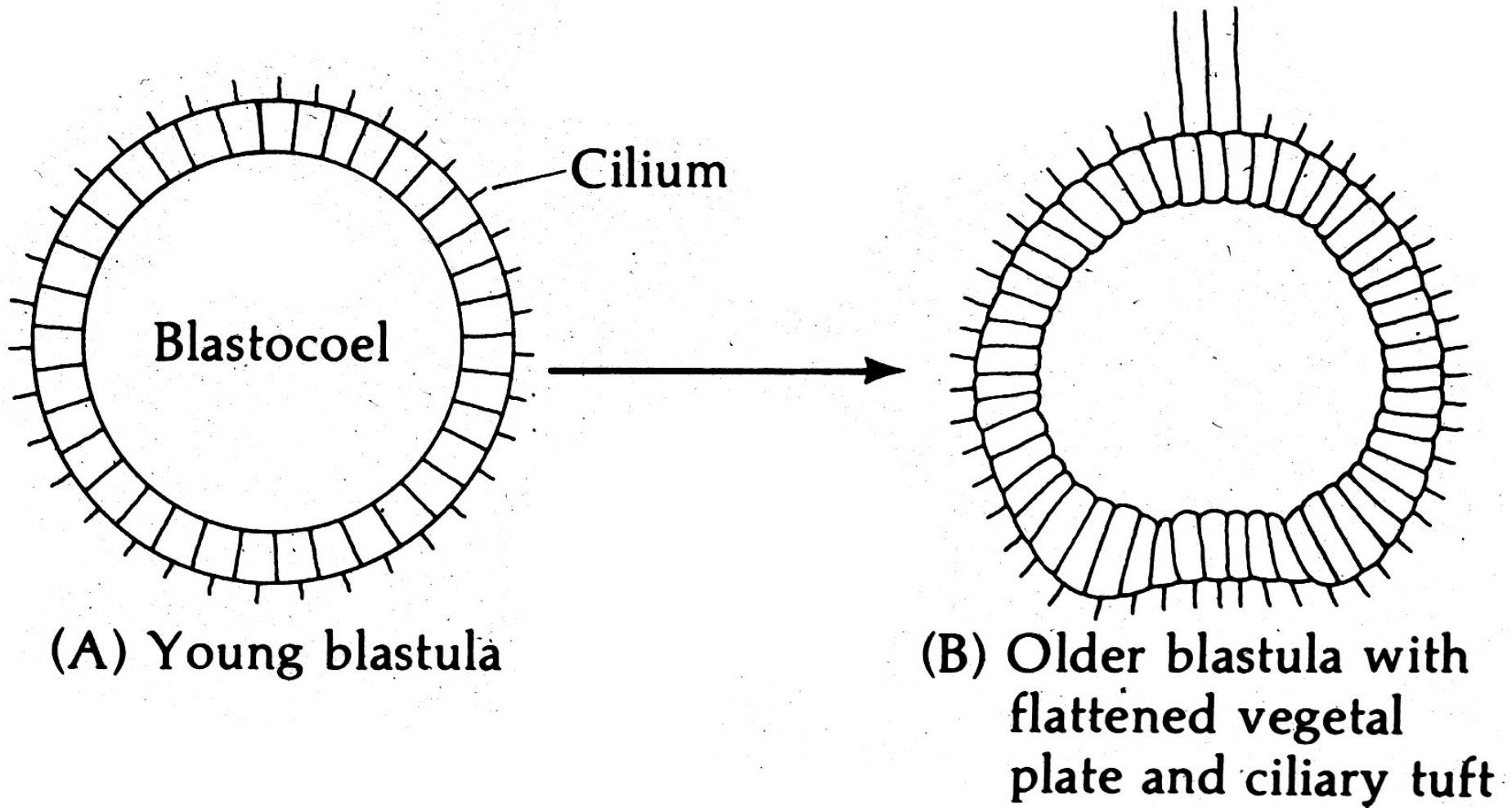


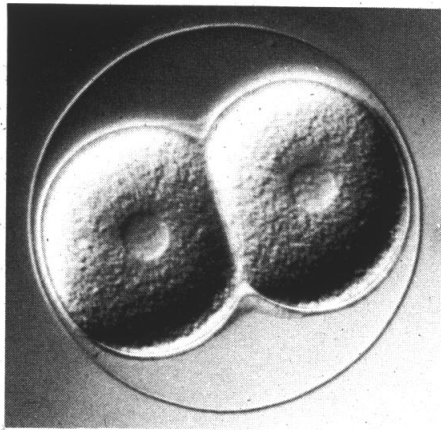
Classification of cleavage types

<i>Cleavage pattern</i>	<i>Position of yolk</i>	<i>Cleavage symmetry</i>	<i>Representative animals</i>
Holoblastic (complete cleavage)	Isolecithal (oligolecithal) (sparse, evenly distributed yolk)	Radial	Echinoderms, <i>Amphioxus</i>
		Spiral	Most molluscs, annelids, flatworms, and roundworms
	Bilateral	Ascidians	
		Rotational	Mammals
	Mesolecithal (moderately telolecithal)	Radial	Amphibians
		Bilateral	Cephalopod molluscs
Meroblastic (incomplete cleavage)	Telolecithal (dense yolk concentrated at one end of egg)	Discoidal (bilateral)	Reptiles, fishes, birds
		Superficial	Most arthropods

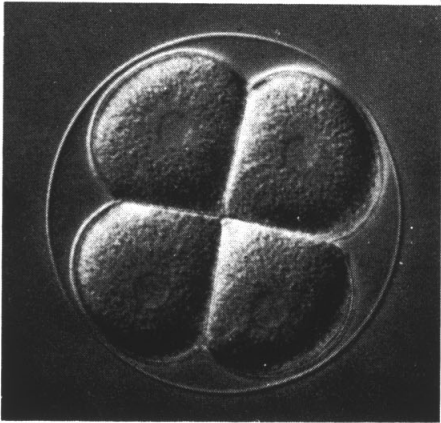




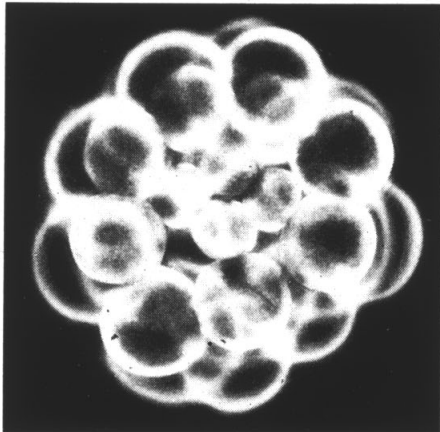




(B)



(C)

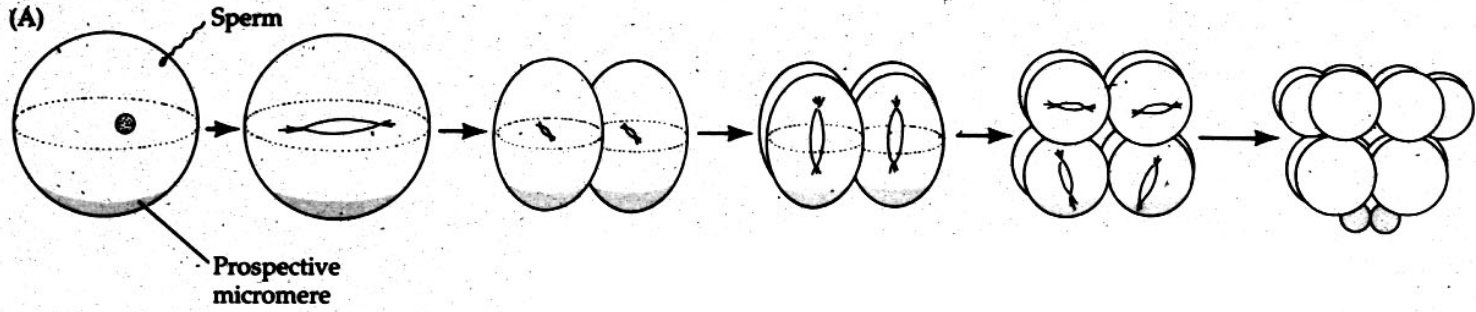


(D)

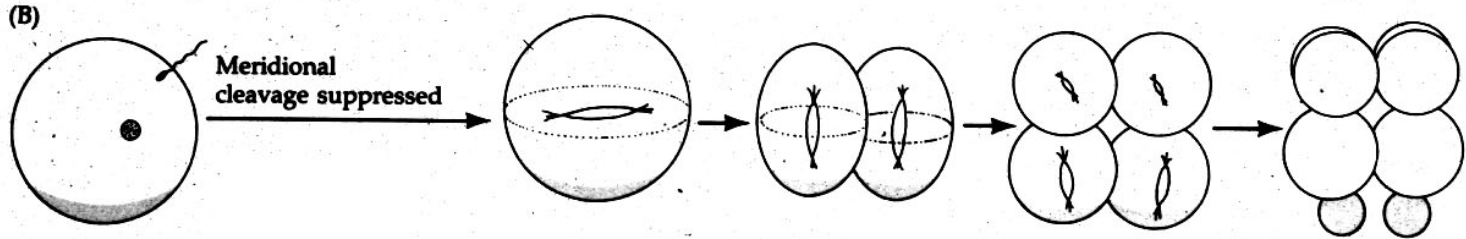
Fertilization

Time

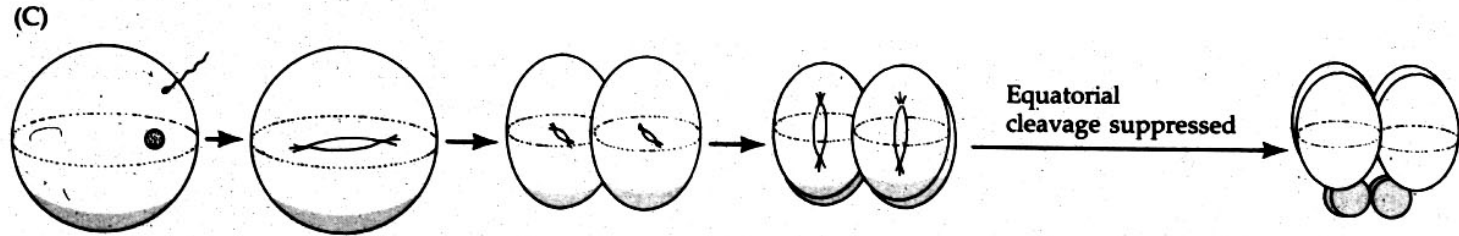
(A)



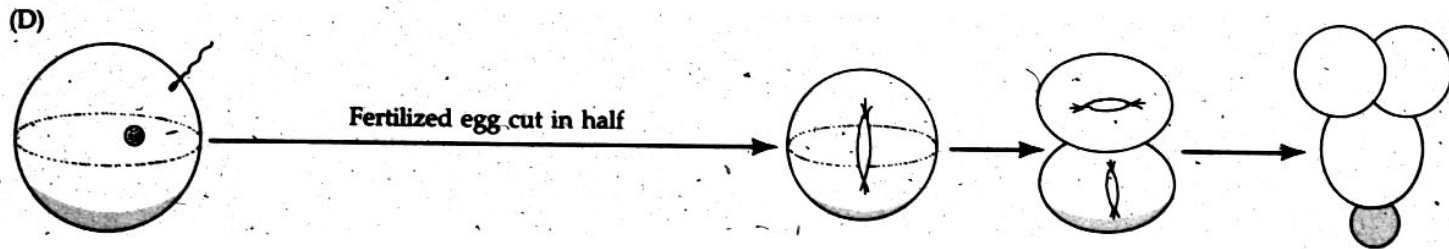
(B)

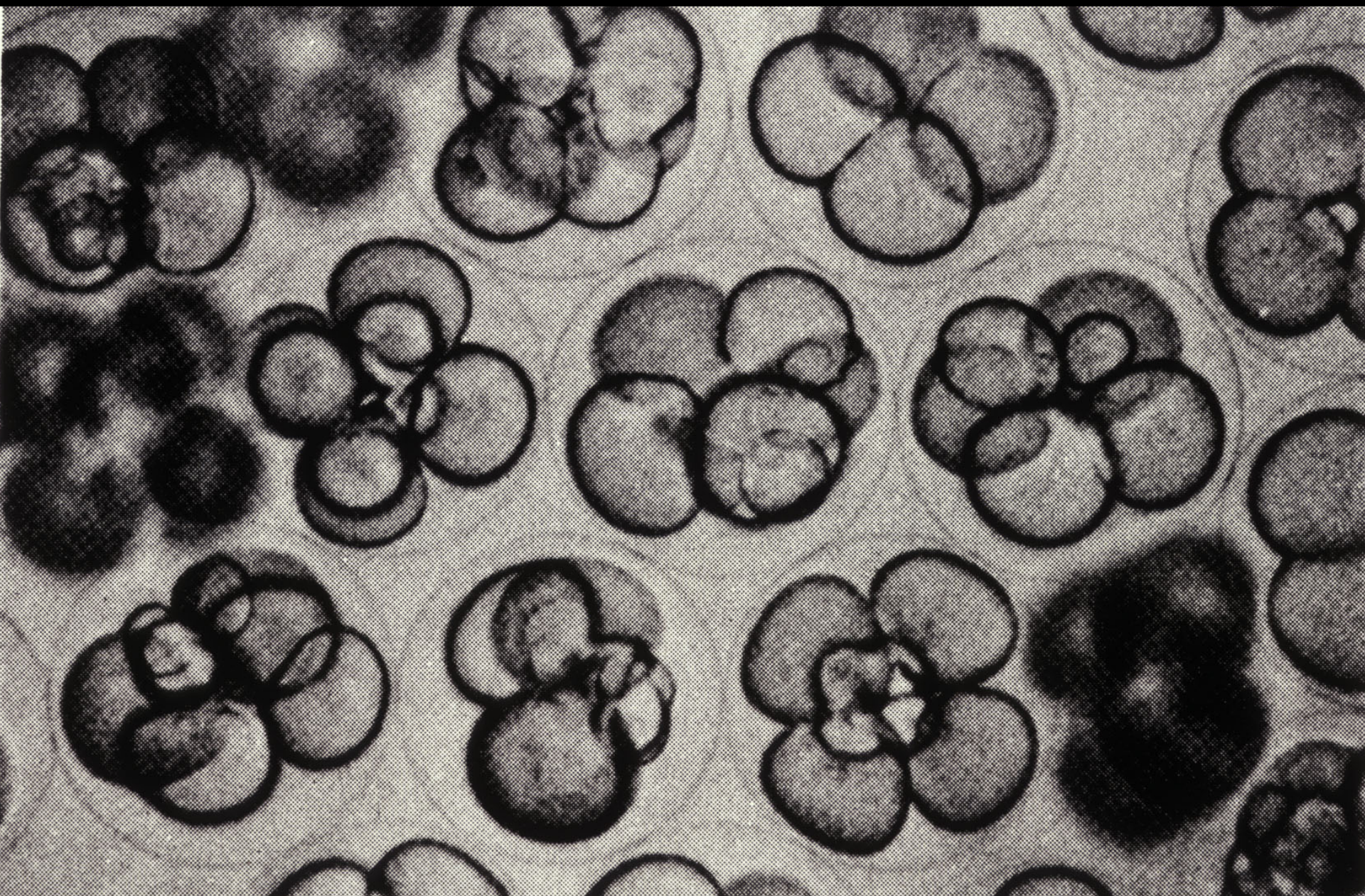


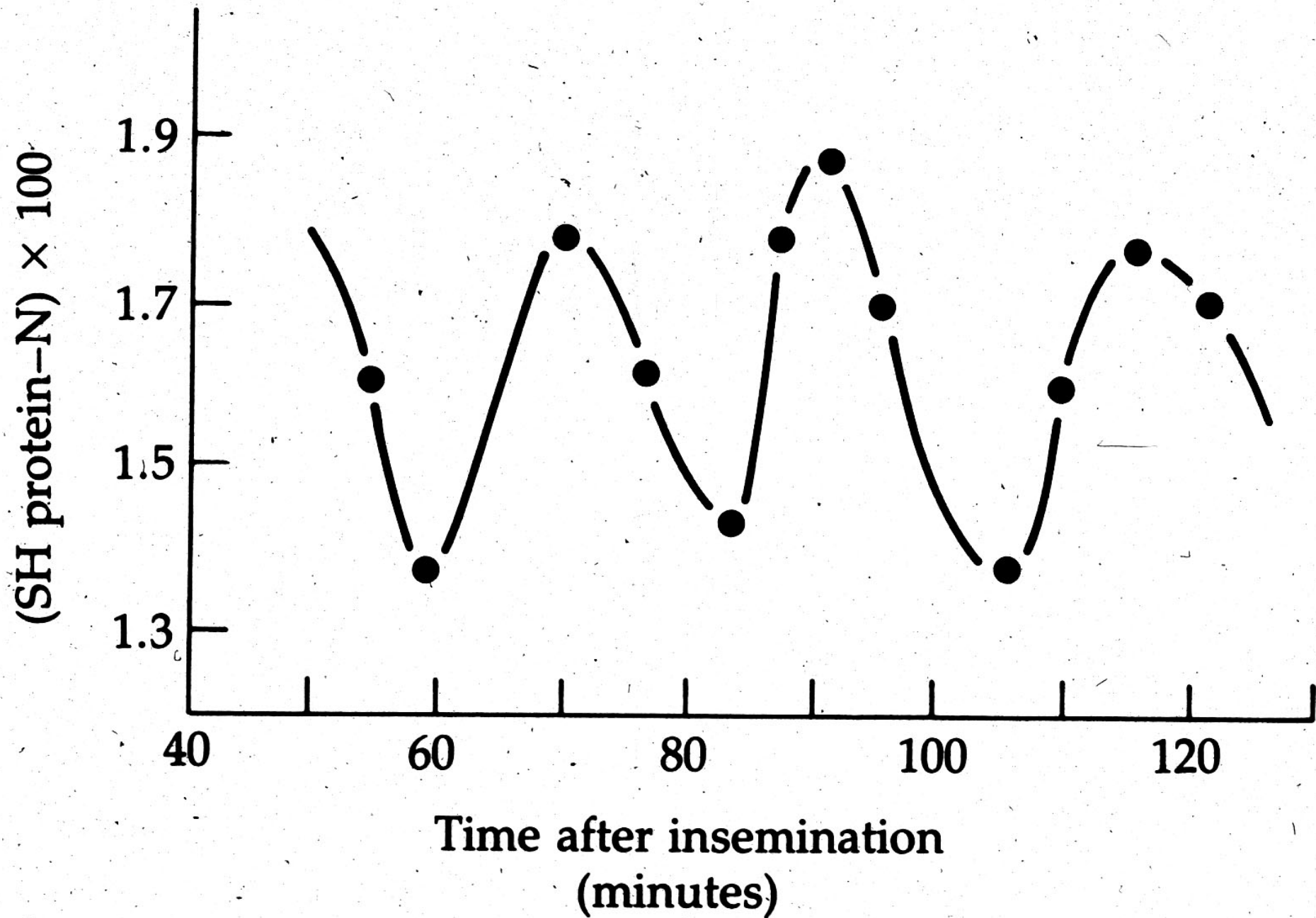
(C)



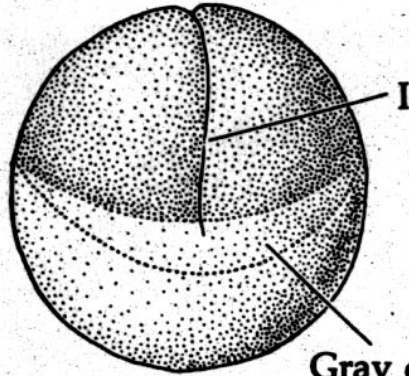
(D)



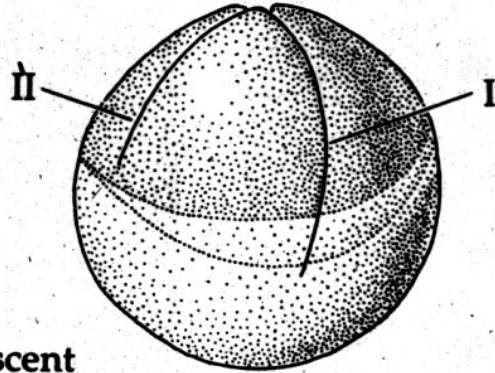




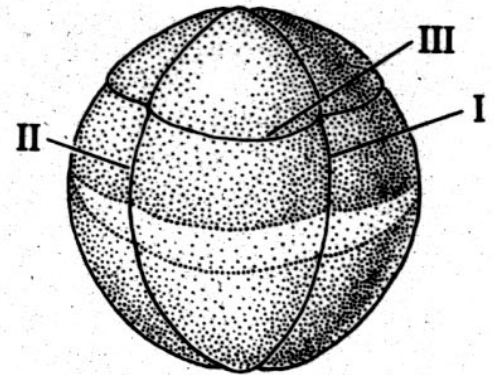
(A)



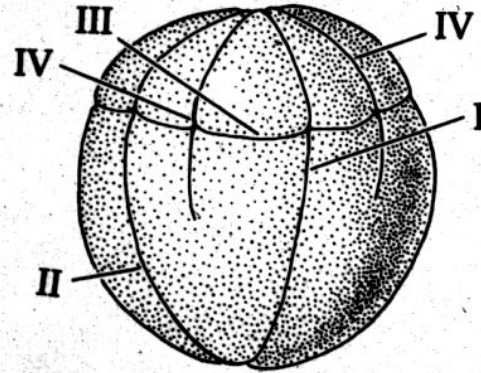
(B)



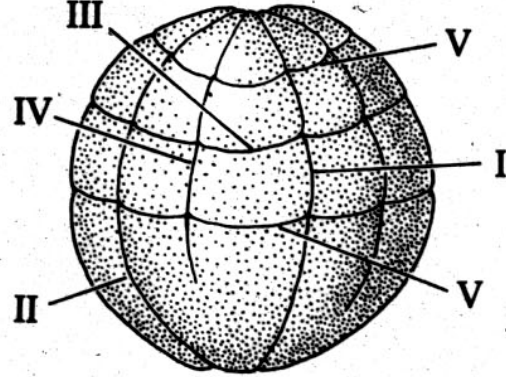
(C)



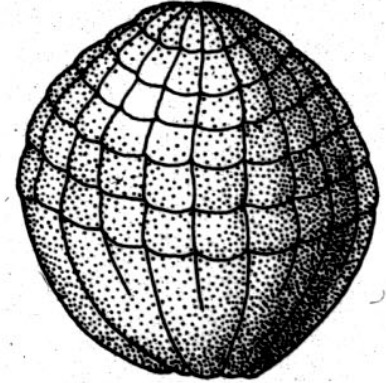
(D)



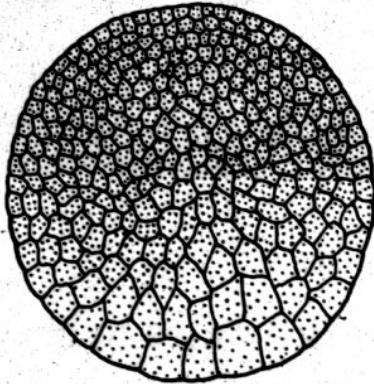
(E)



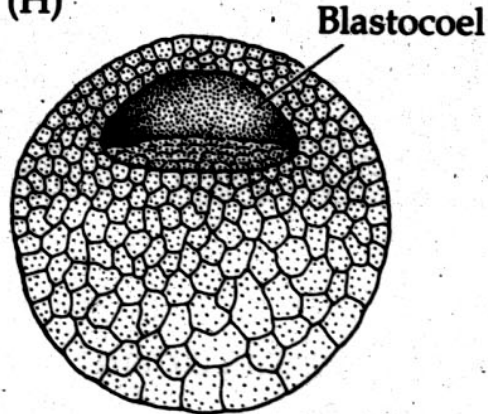
(F)

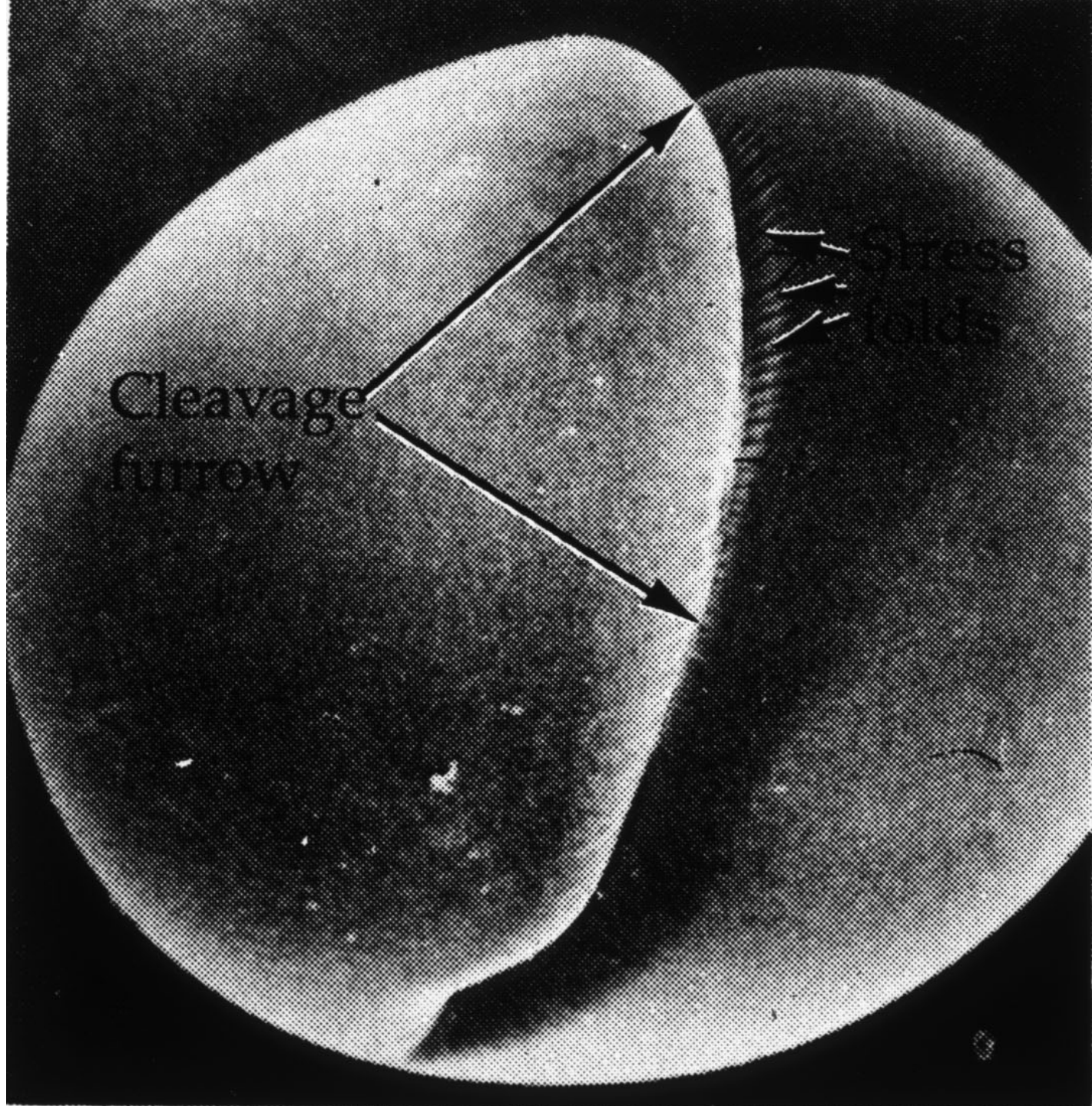


(G)



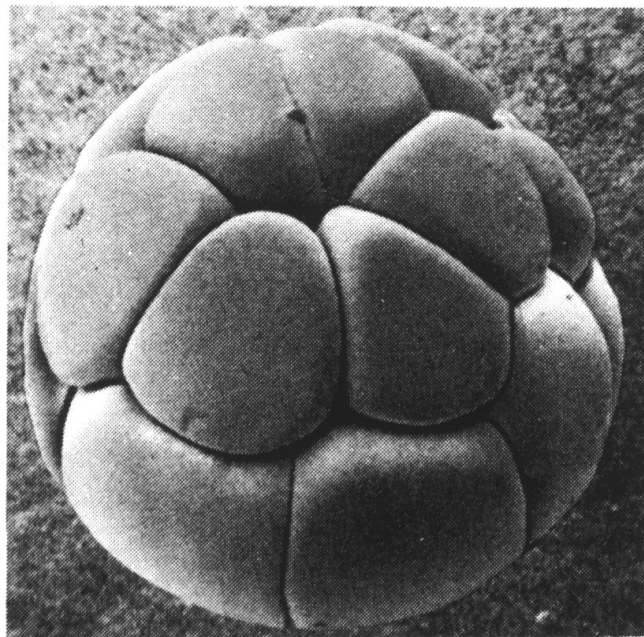
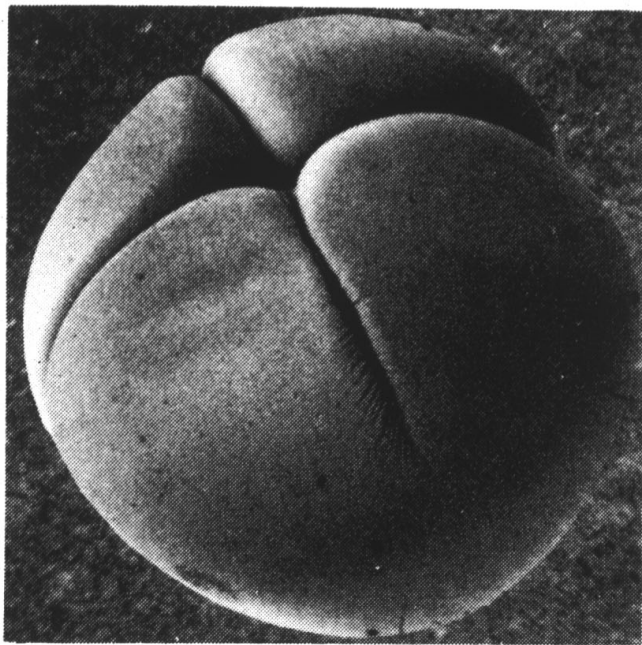
(H)

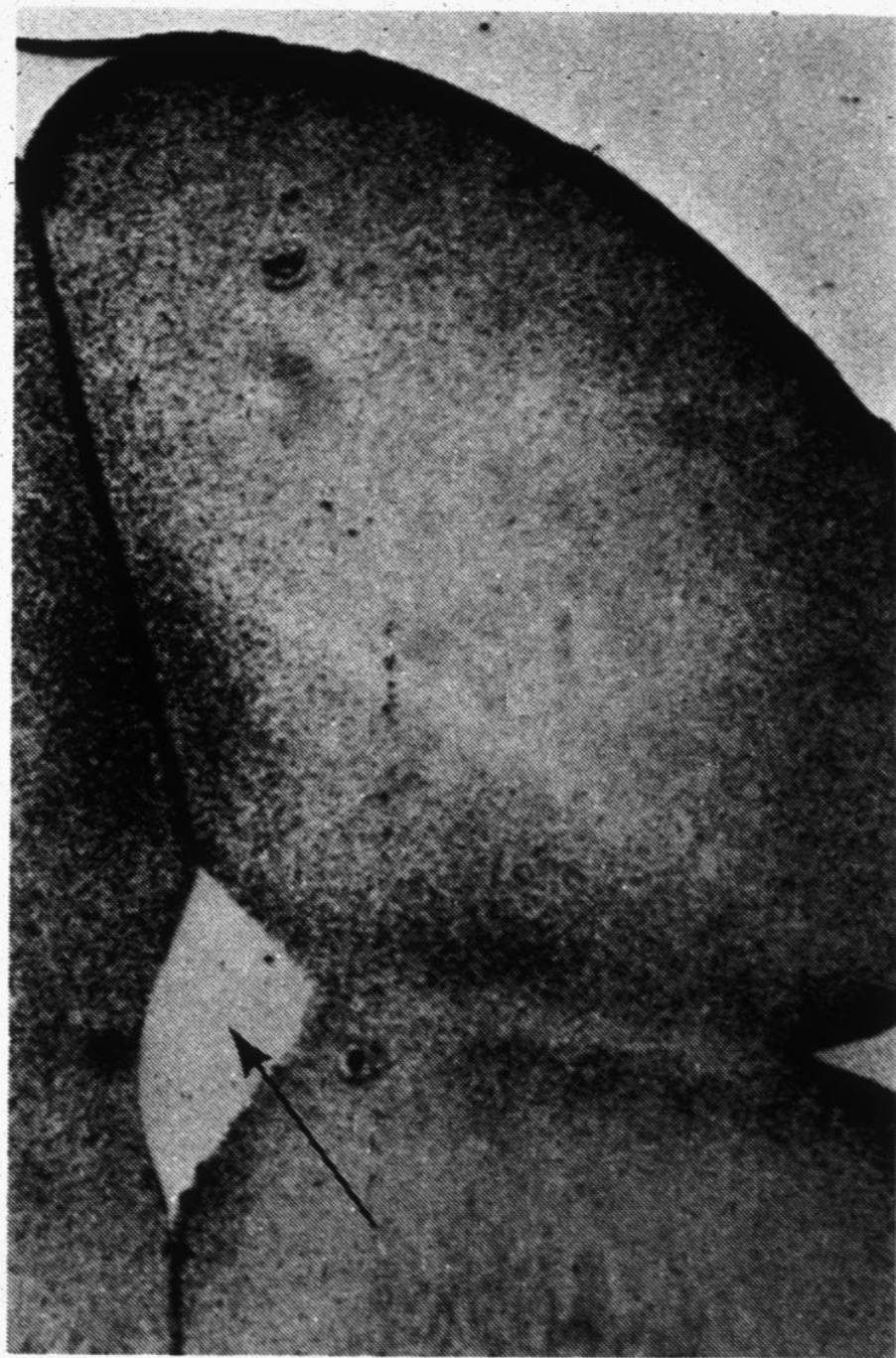
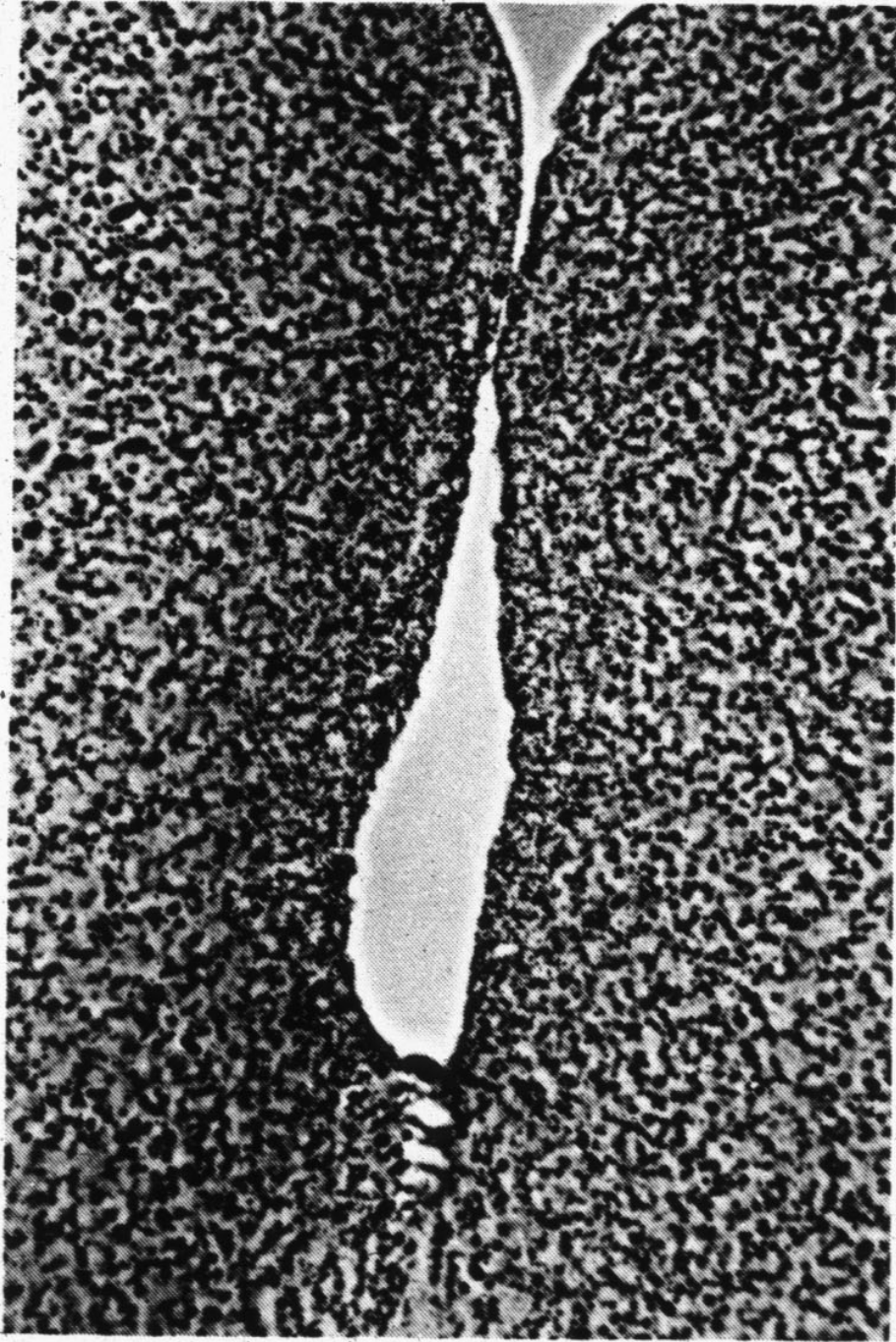




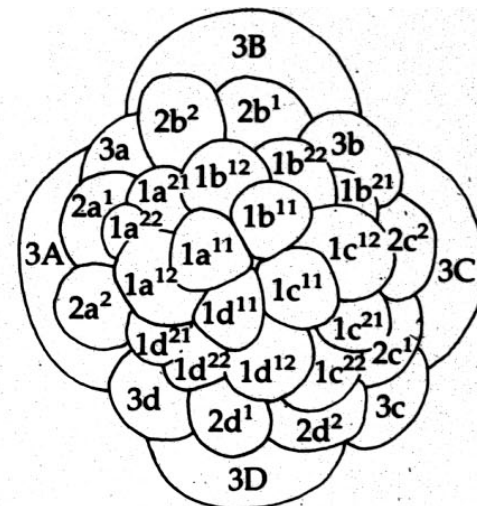
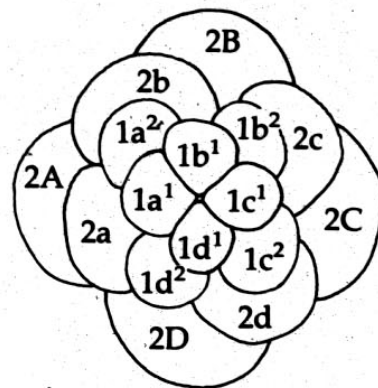
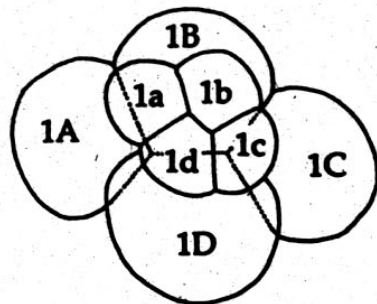
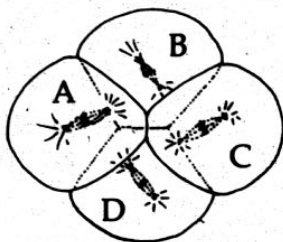
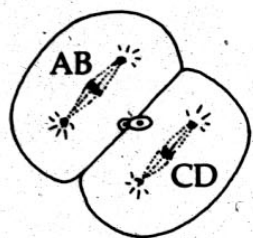
Cleavage
furrow

stress
fibers

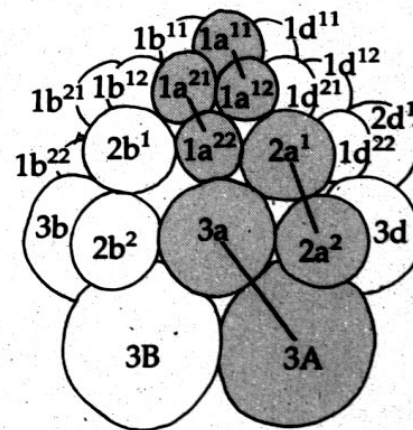
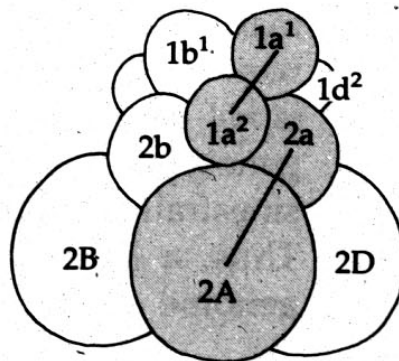
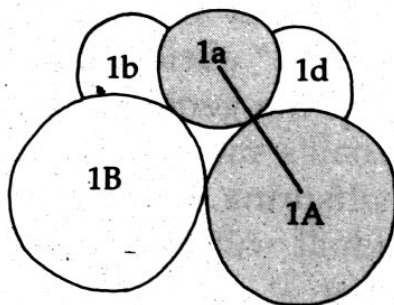
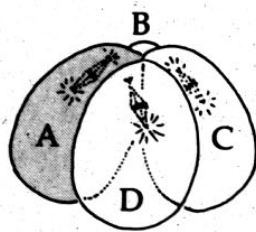
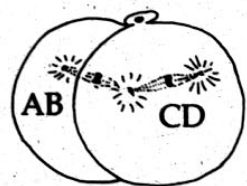




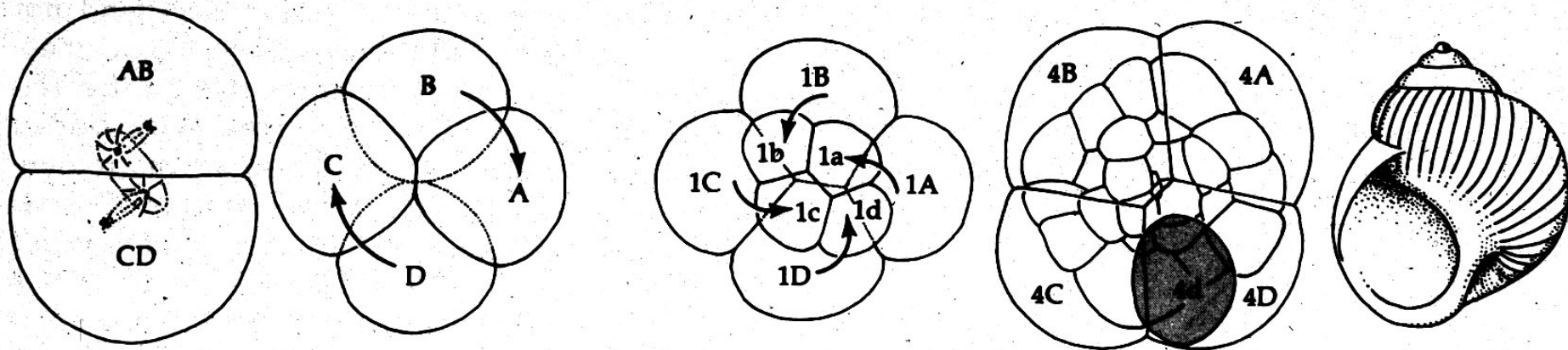
View from animal pole



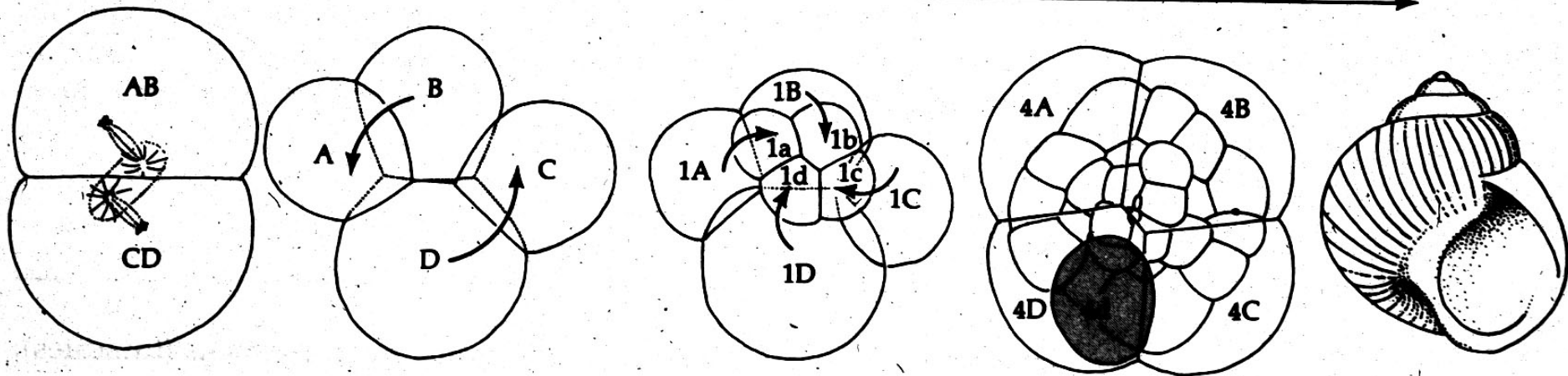
Side view



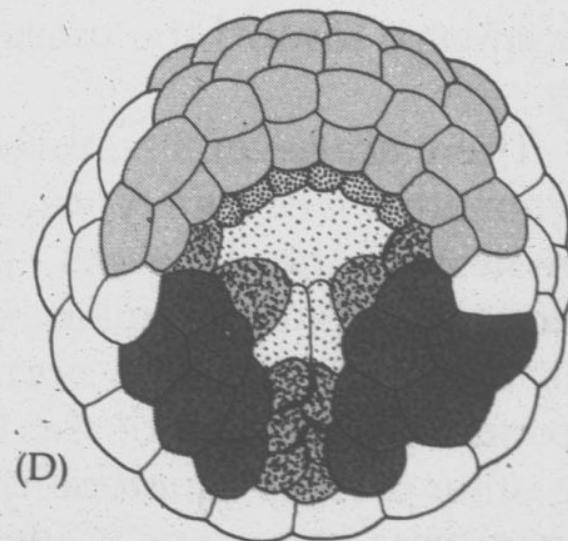
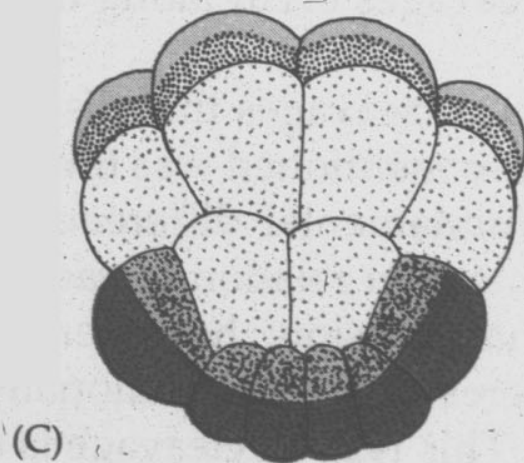
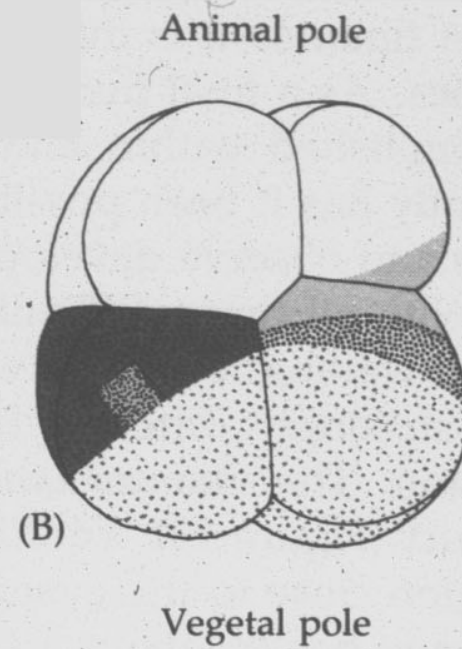
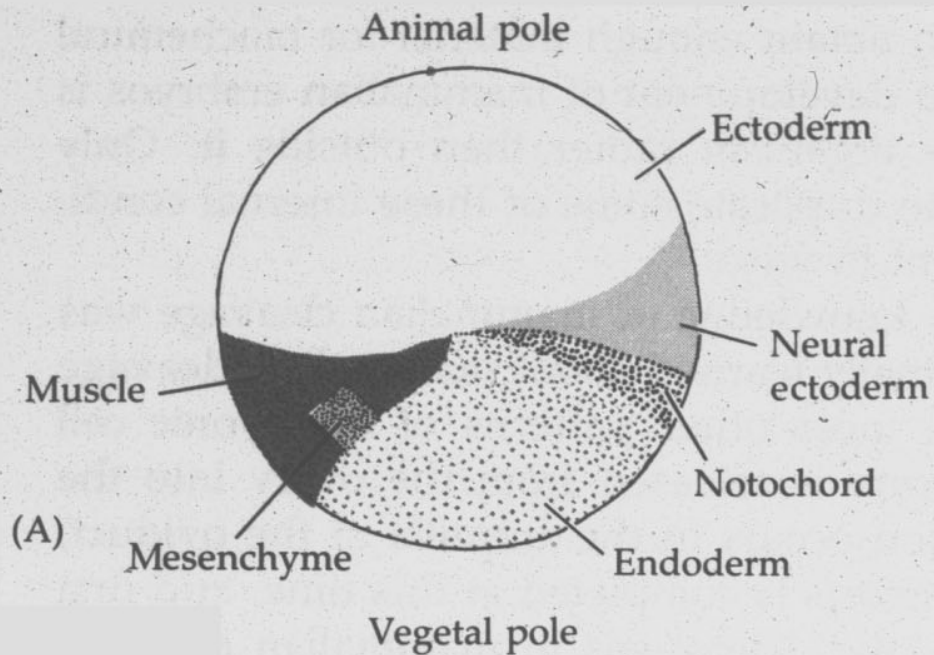
Left-handed coiling



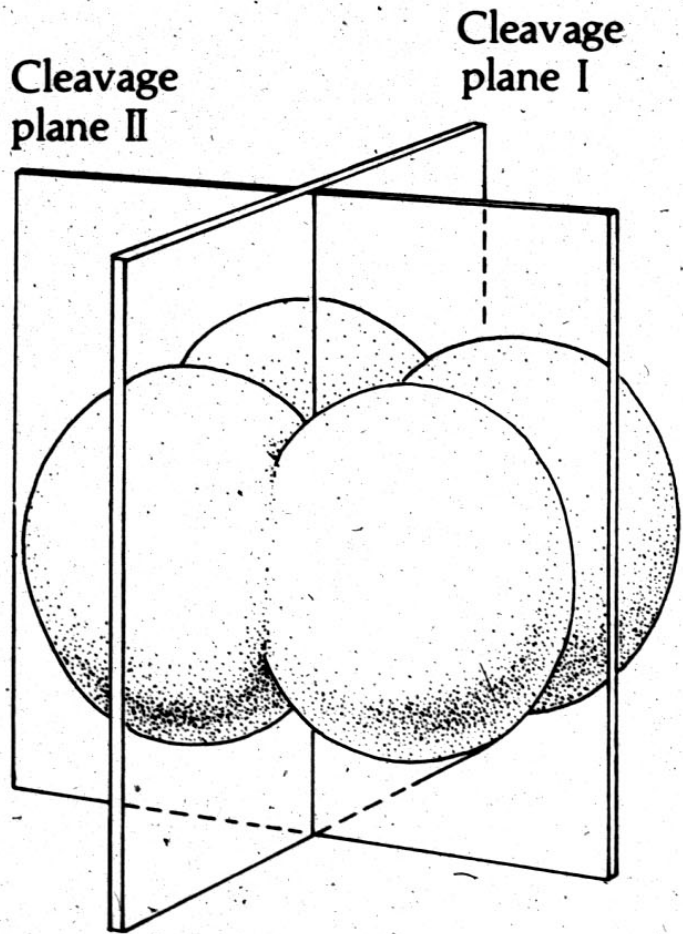
Right-handed coiling



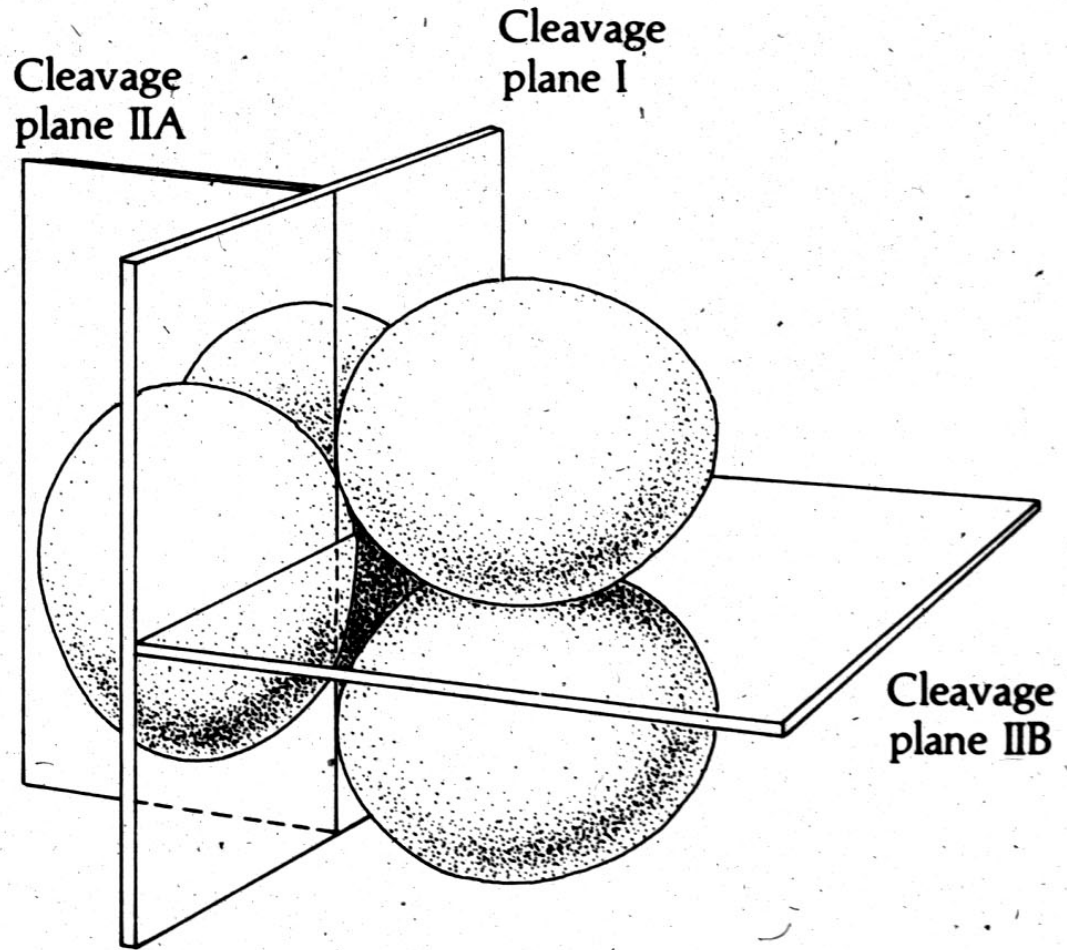
DD (female) \times dd (male) \rightarrow Dd (all right-coiling)
 DD (male) \times dd (female) \rightarrow Dd (all left-coiling)
 Dd \times Dd \rightarrow 1 DD :2 Dd :1 dd (all right-coiling)



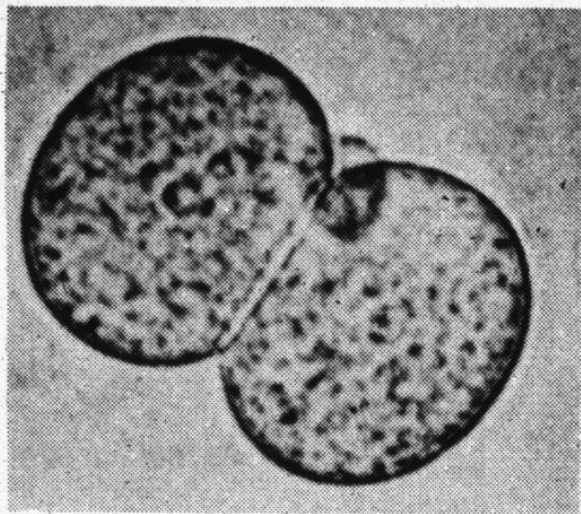
View from vegetal pole



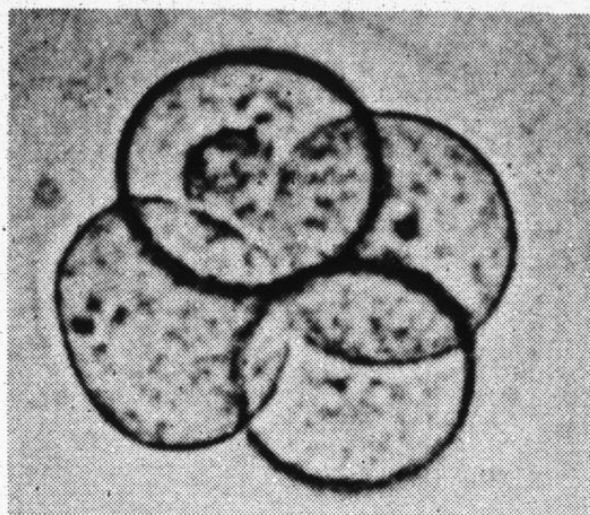
(A) ECHINODERM (Sea urchin)



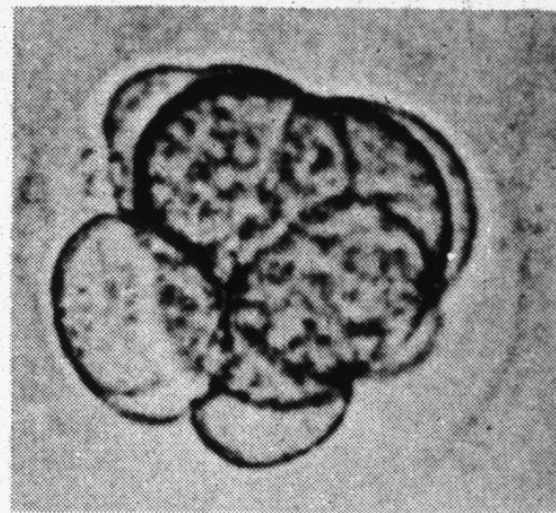
(B) MAMMAL (Rabbit)



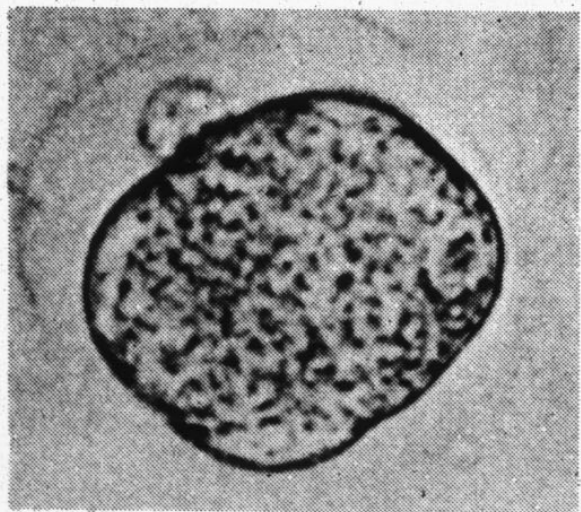
(A)



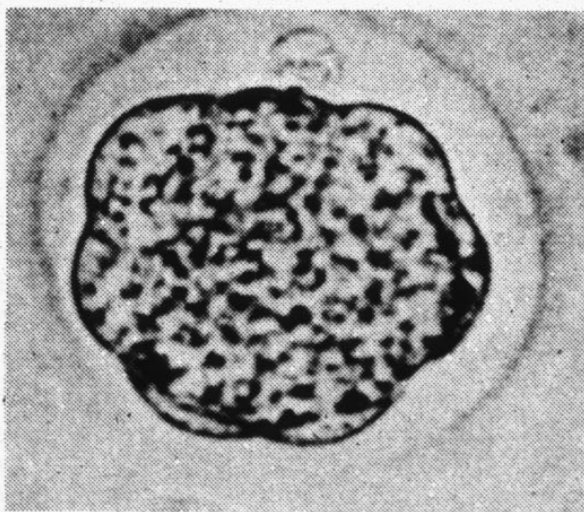
(B)



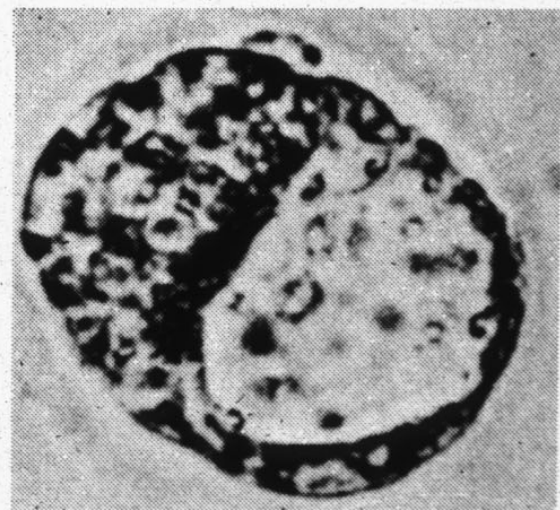
(C)



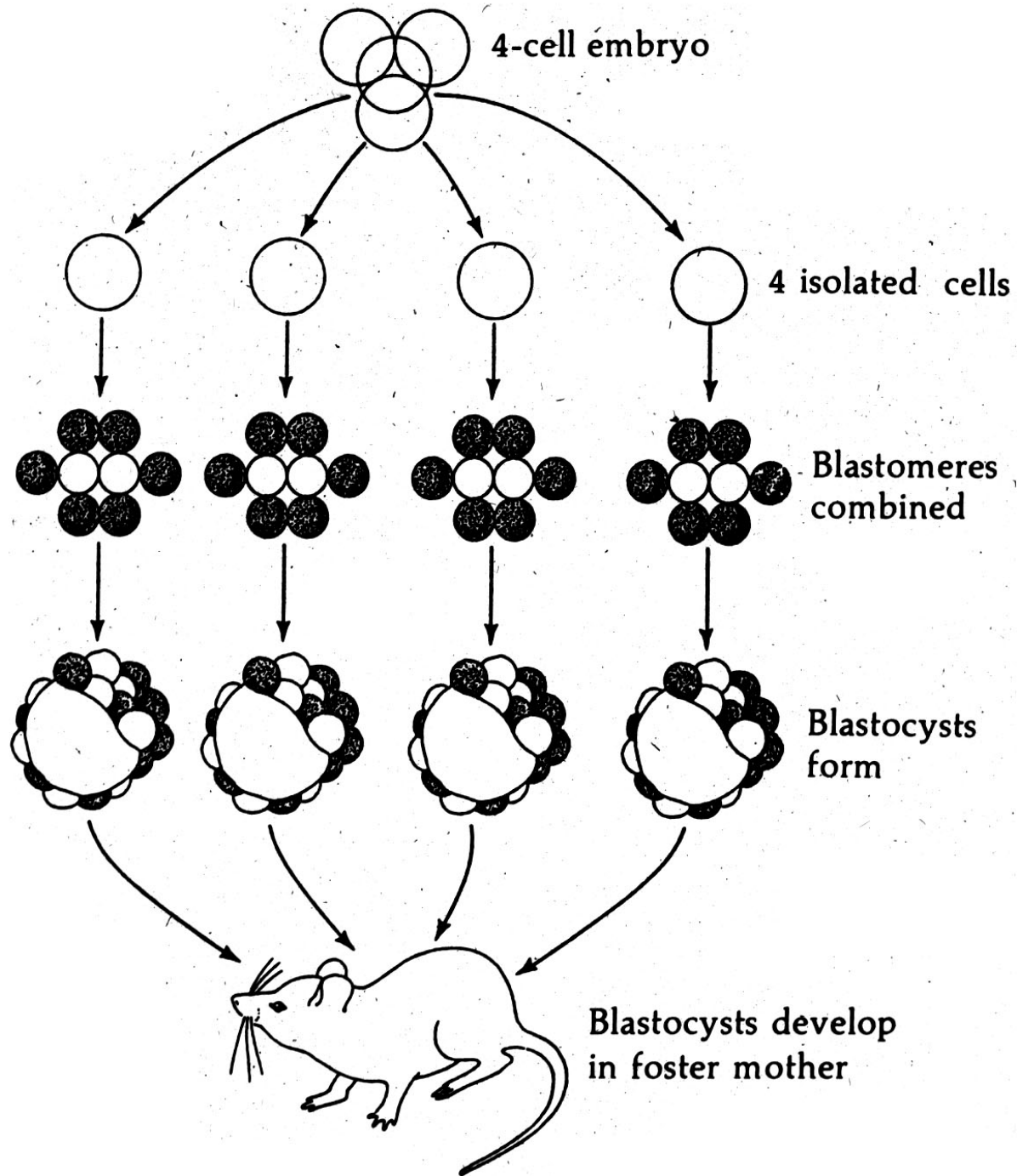
(D)



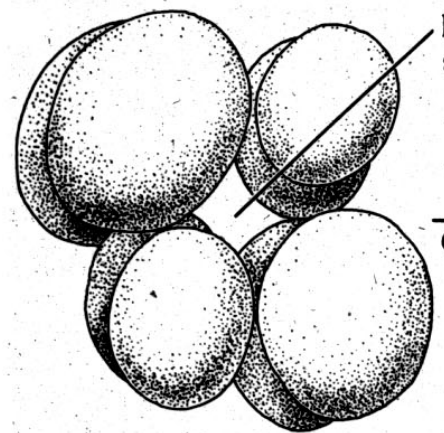
(E)



(F)



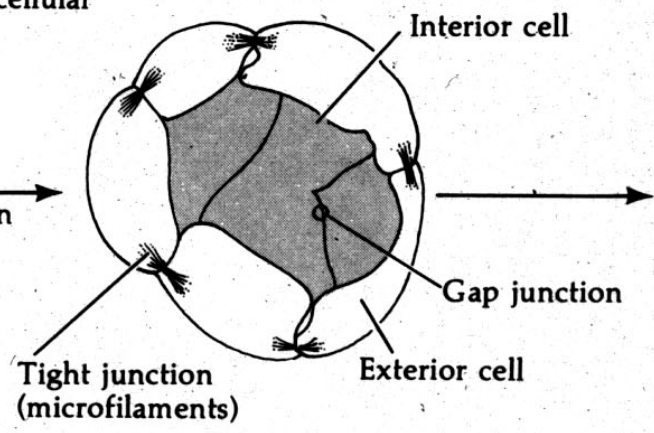
Early 8-cell



Large intercellular spaces

Compaction

Morula



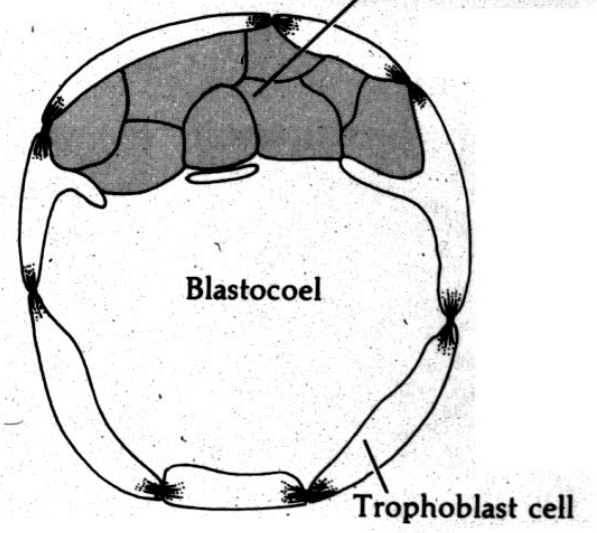
Interior cell

Tight junction (microfilaments)

Gap junction

Exterior cell

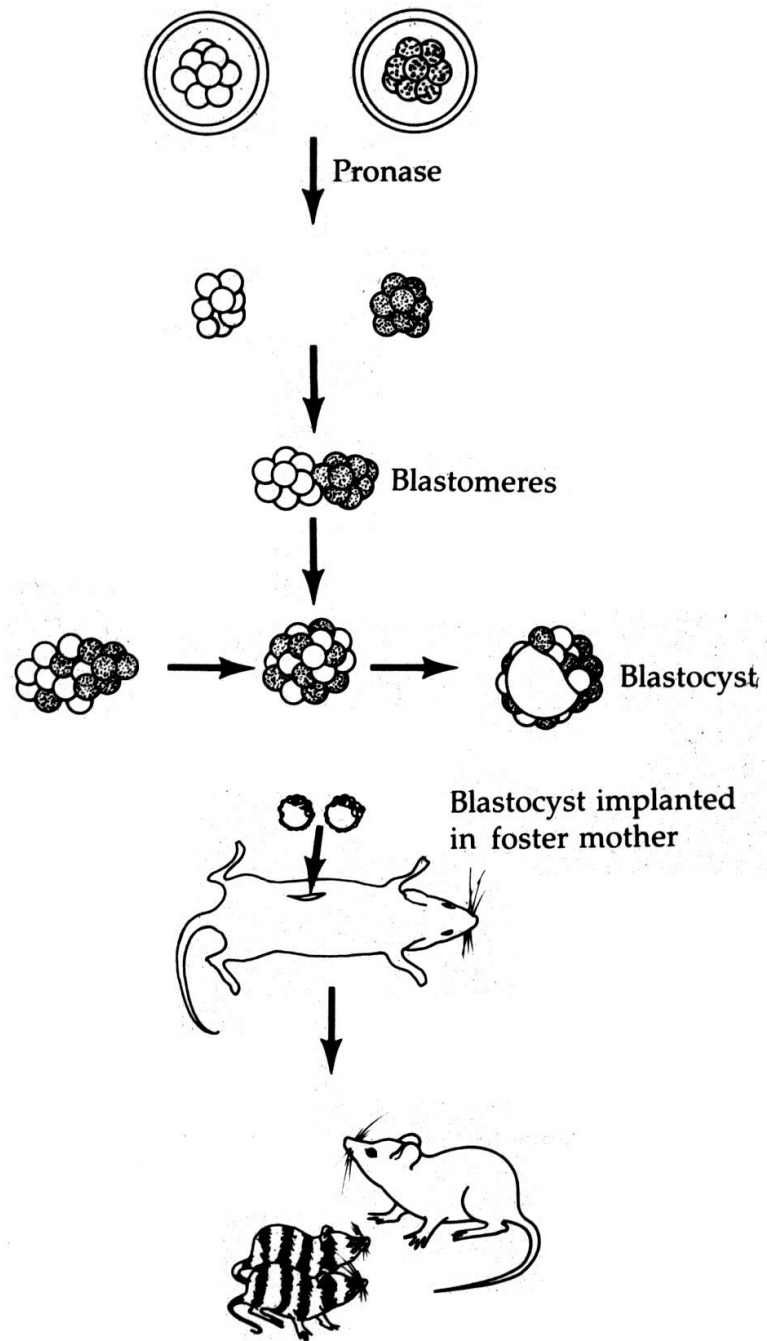
Blastocyst

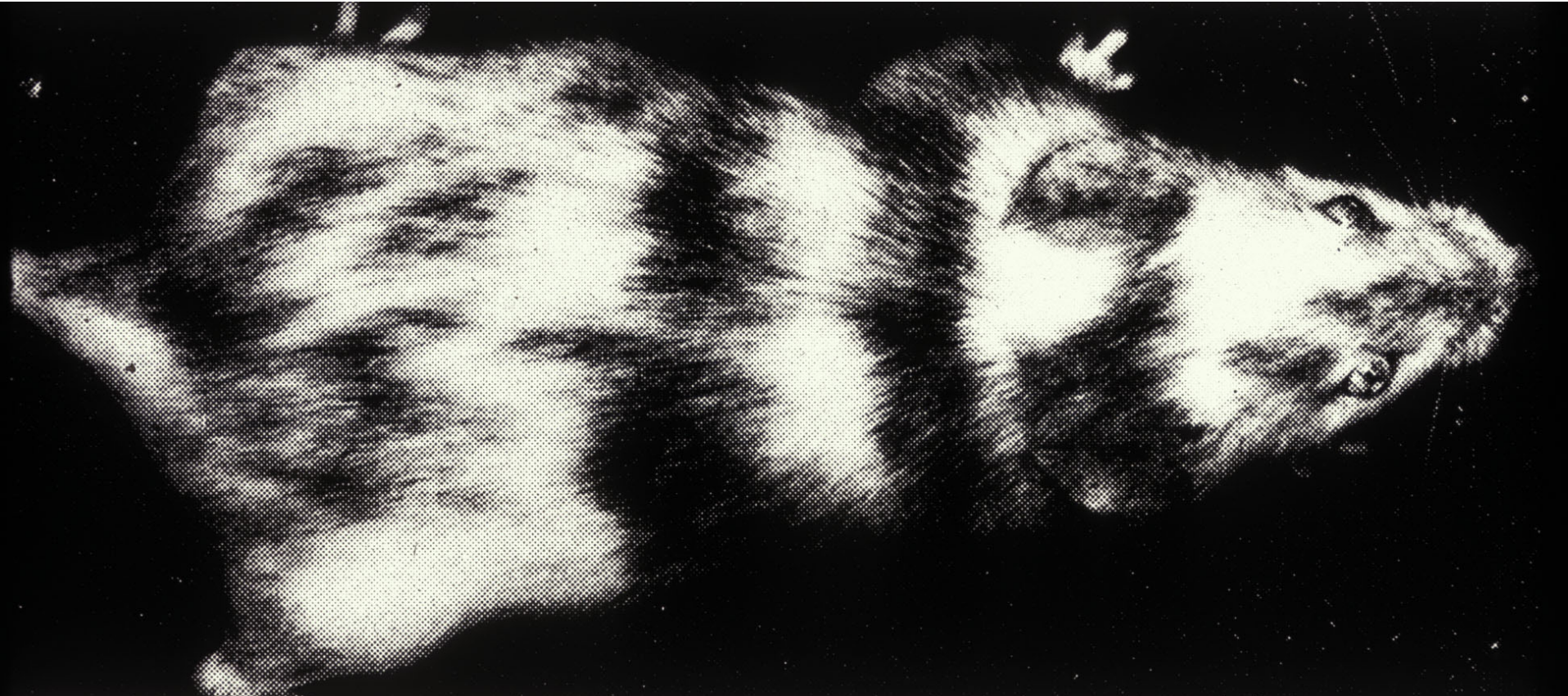


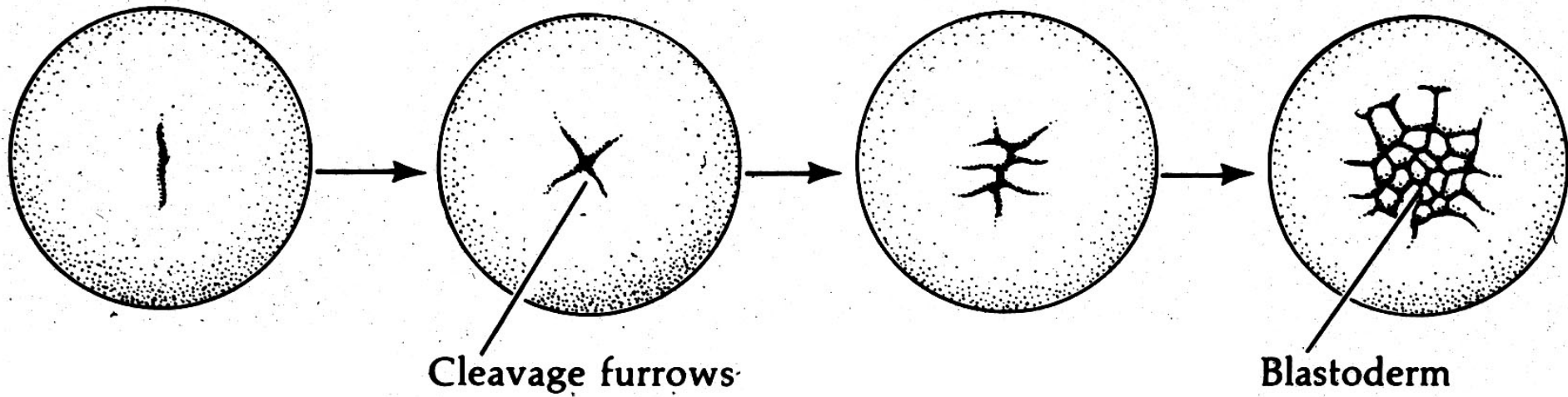
Inner cell mass

Blastocoel

Trophoblast cell

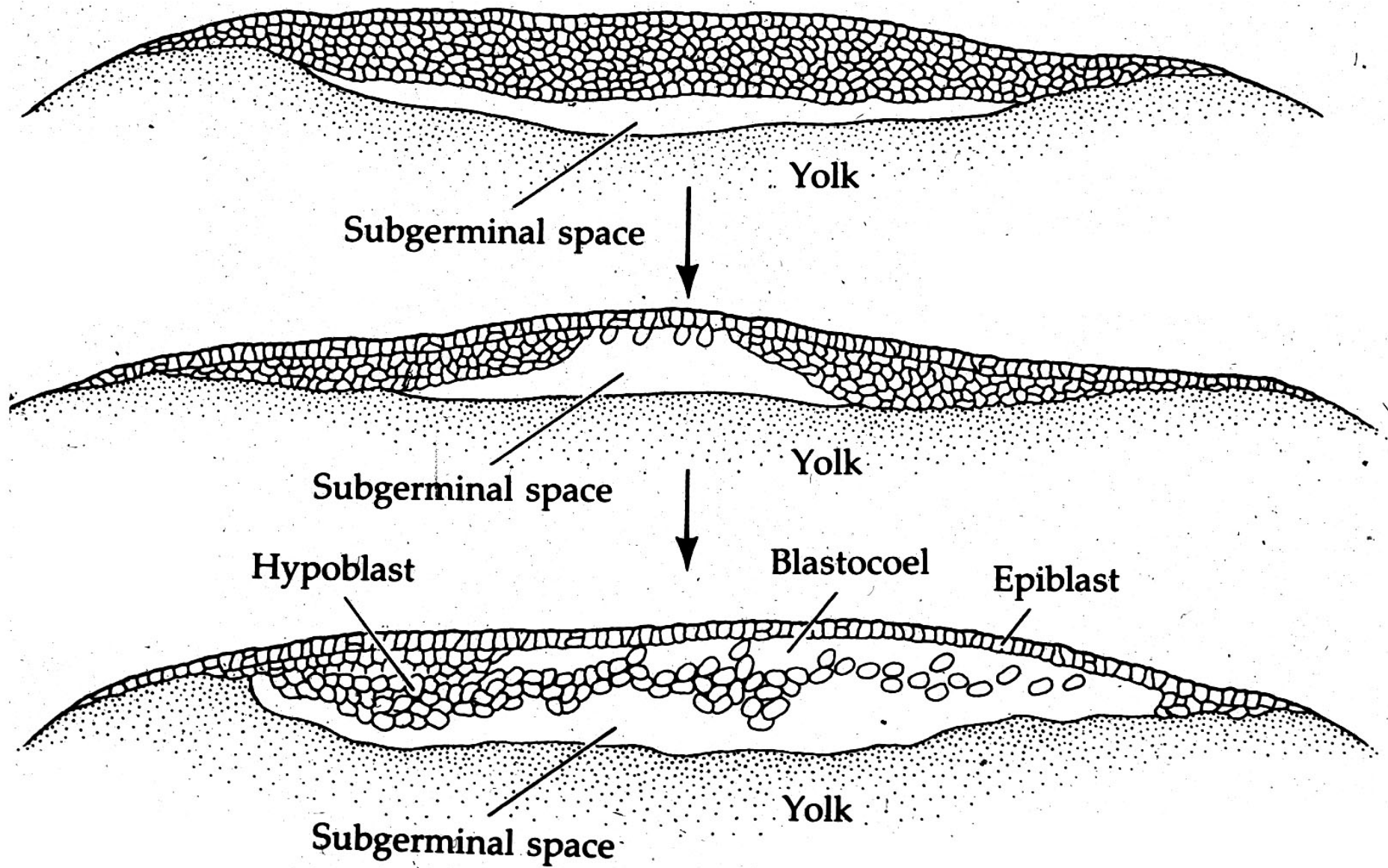




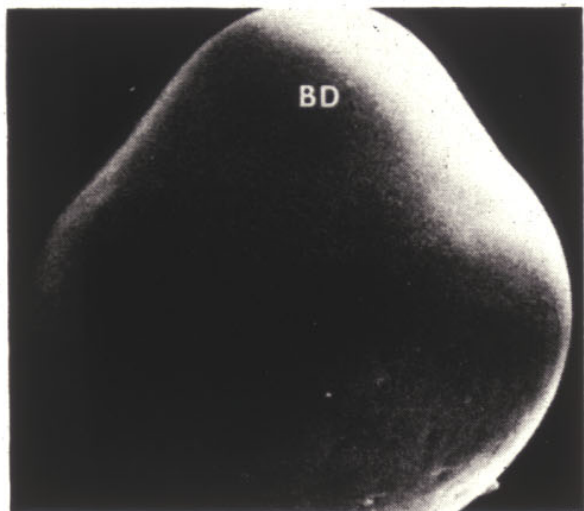


Cleavage furrows

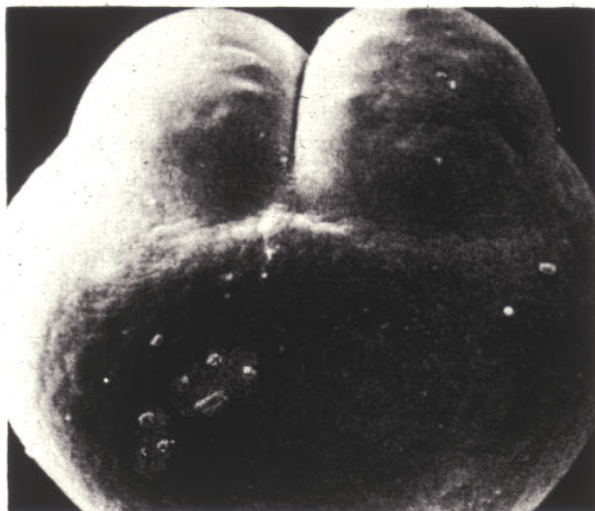
Blastoderm



(A)



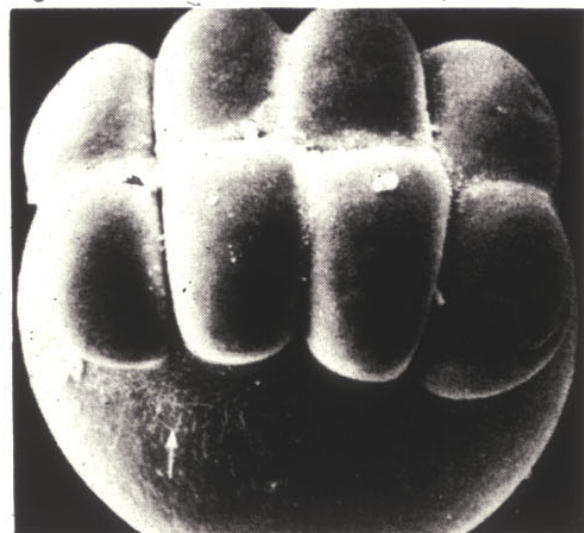
(B)



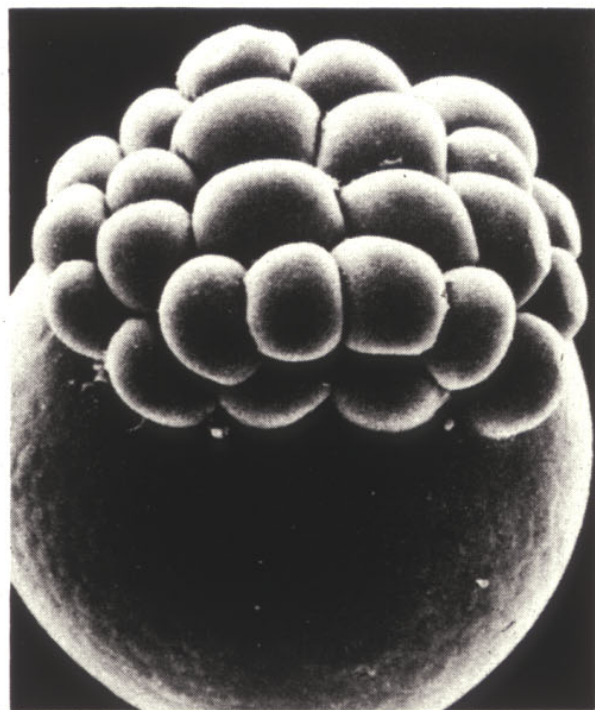
(C)



(D)



(E)



(F)



