















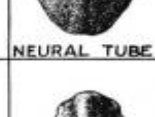




**Faculty of Biological Science and Technology**  
**Zoology and Botanical Department**  
**Practical Embryology**











# **Amphibian development**

## **(7 mm larvae; horizontal sections)**

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STAGE NUMBER		STAGE NUMBER		STAGE NUMBER	
AGE-HOURS AT 18°C		AGE-HOURS AT 18°C		AGE-HOURS AT 18°C	
1	0	7	7.5	13	50
					
	UNFERTILIZED		32-CELL		NEURAL PLATE
2	1	8	16	14	62
					
	GRAY CRESCENT		MID-CLEAVAGE		NEURAL FOLDS
3	3.5	9	21	15	67
					
	TWO-CELL		LATE CLEAVAGE		ROTATION
4	4.5	10	26	16	72
					
	FOUR-CELL		DORSAL LIP		NEURAL TUBE
5	5.7	11	34	17	84
					
	EIGHT-CELL		MID-GASTRULA		TAIL BUD
6	6.5	12	42		
					
	SIXTEEN-CELL		LATE GASTRULA		



STAGE NUMBER			AGE IN HOURS AT 18° CENTIGRADE		LENGTH IN MILLIMETERS	
18	96	4				
			MUSCULAR RESPONSE			
19	118	5				
			HEART BEAT			
20	140	6				
			GILL CIRCULATION	HATCHING		
21	162	7				
			MOUTH OPEN	CORNEA TRANSPARENT		
22	192	8				
			TAIL FIN CIRCULATION			



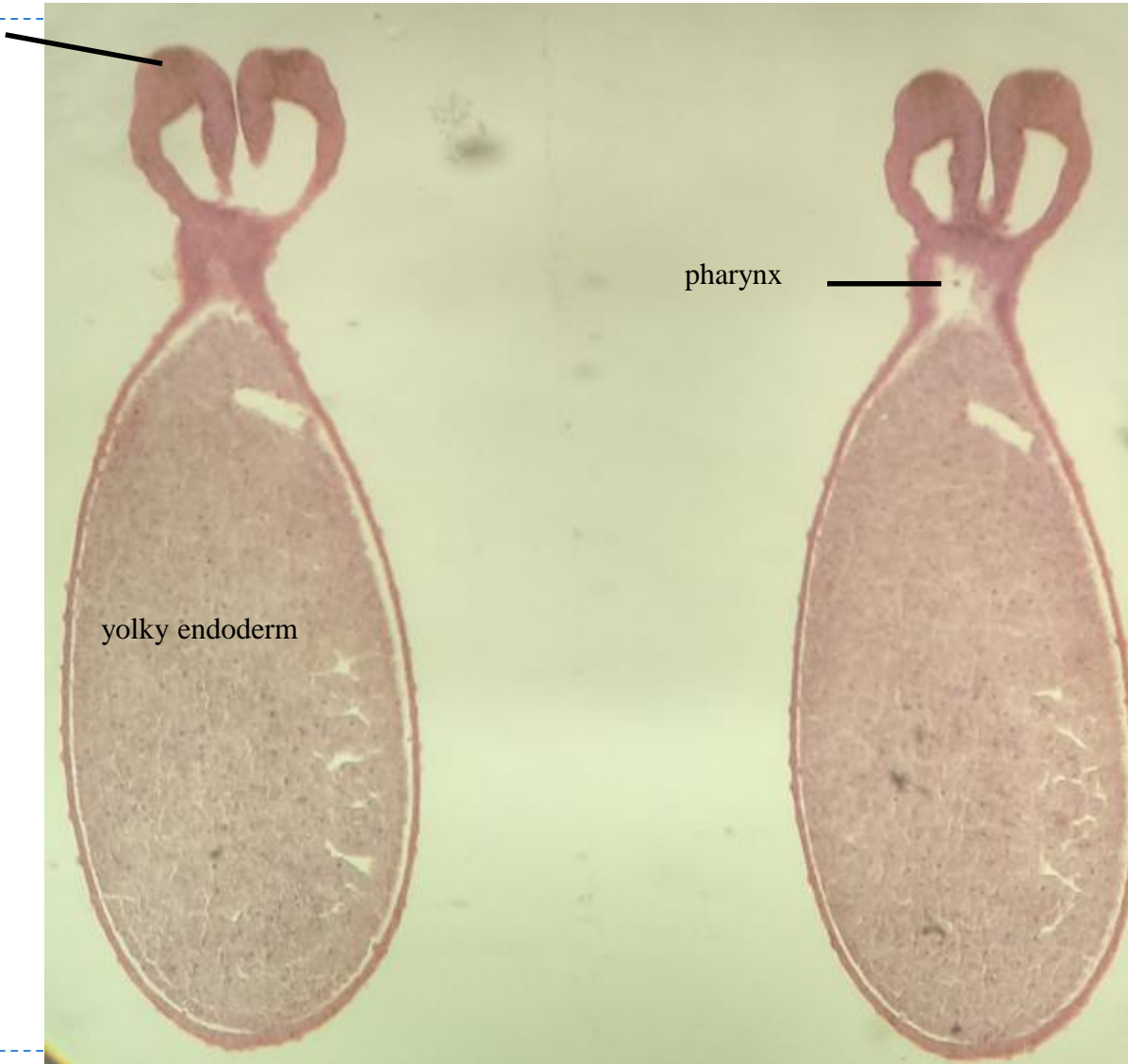
- 
- ▶ stage 21, 162 hpf, 7 mm, mouth open

# horizontal Sections





oral sucker



pharynx

yolky endoderm



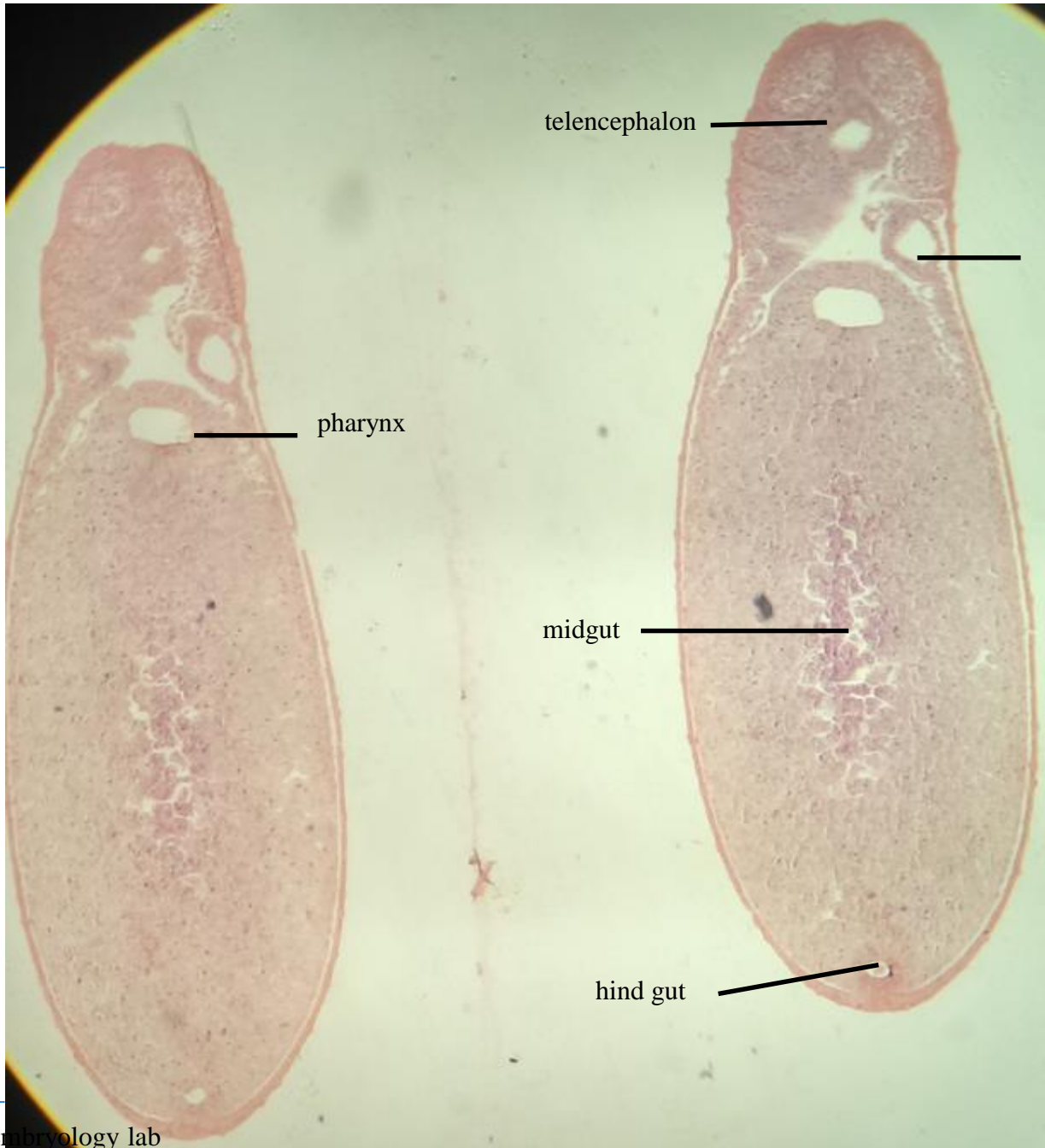
pharynx

gut



diencephalon

heart rudiment









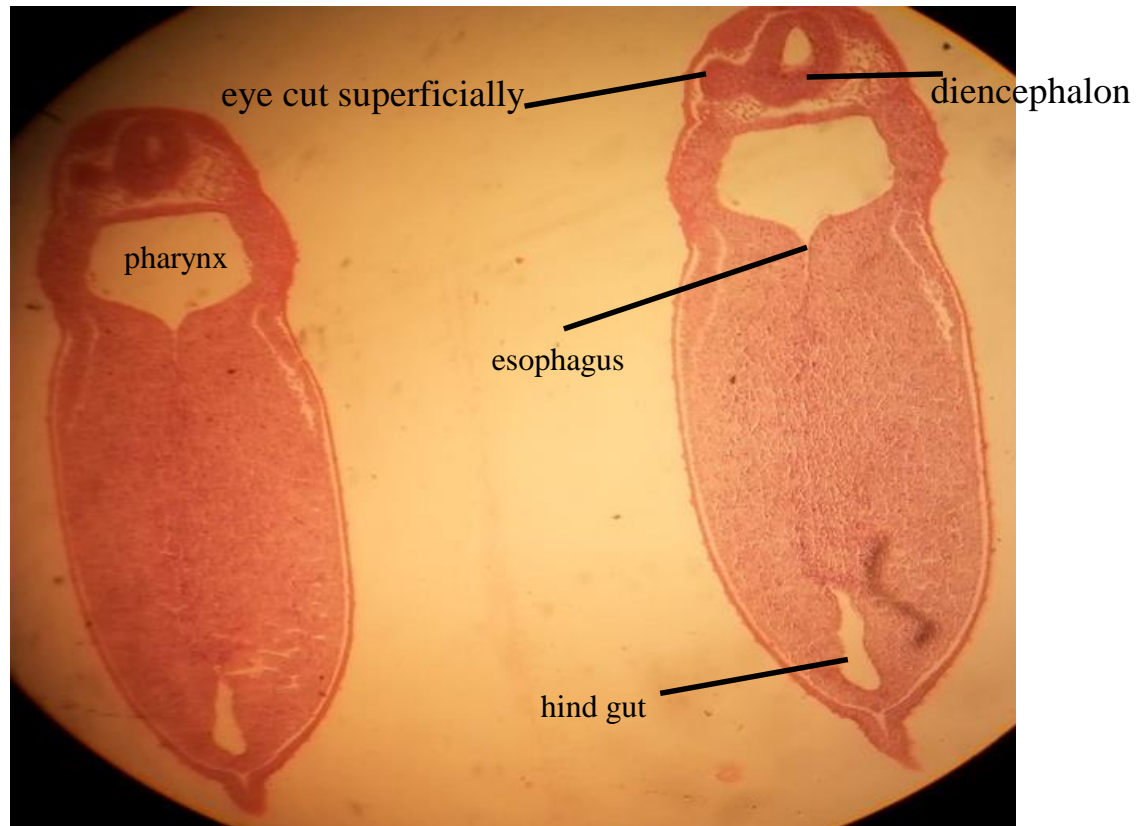


# Quiz time!

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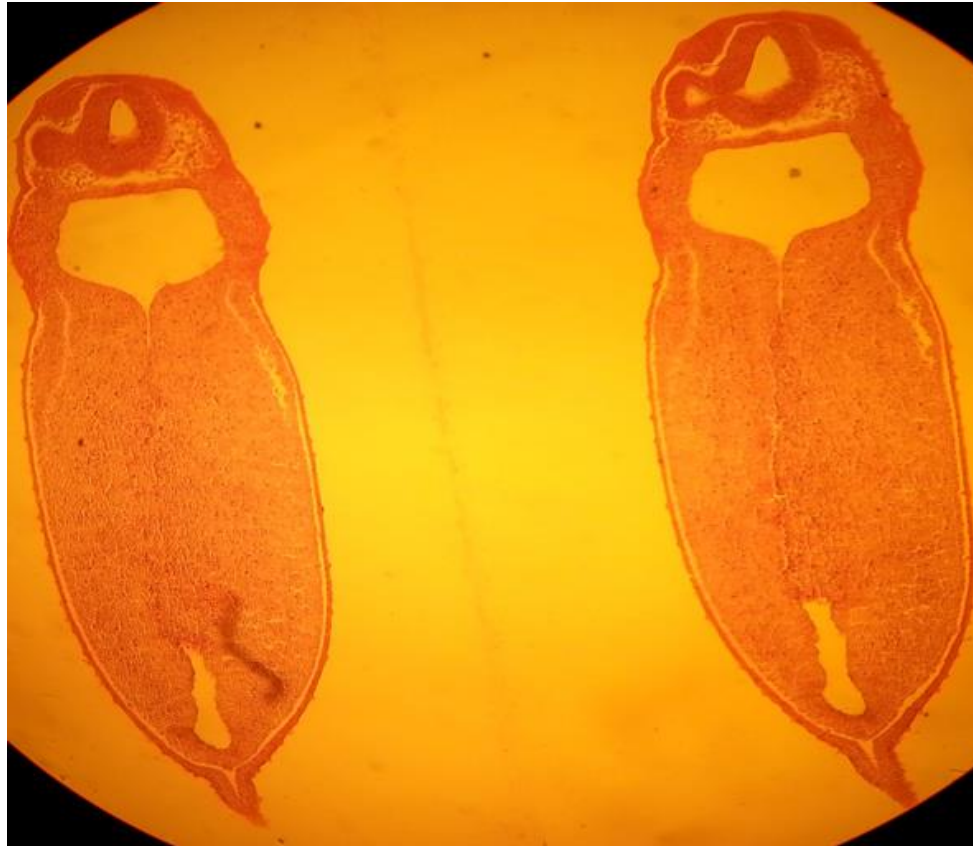


■ name different part





# Quiz time!



■ name different part

# Quiz time!



■ name different part

