



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

Amphibian development

(7 mm larvae; sagittal sections)

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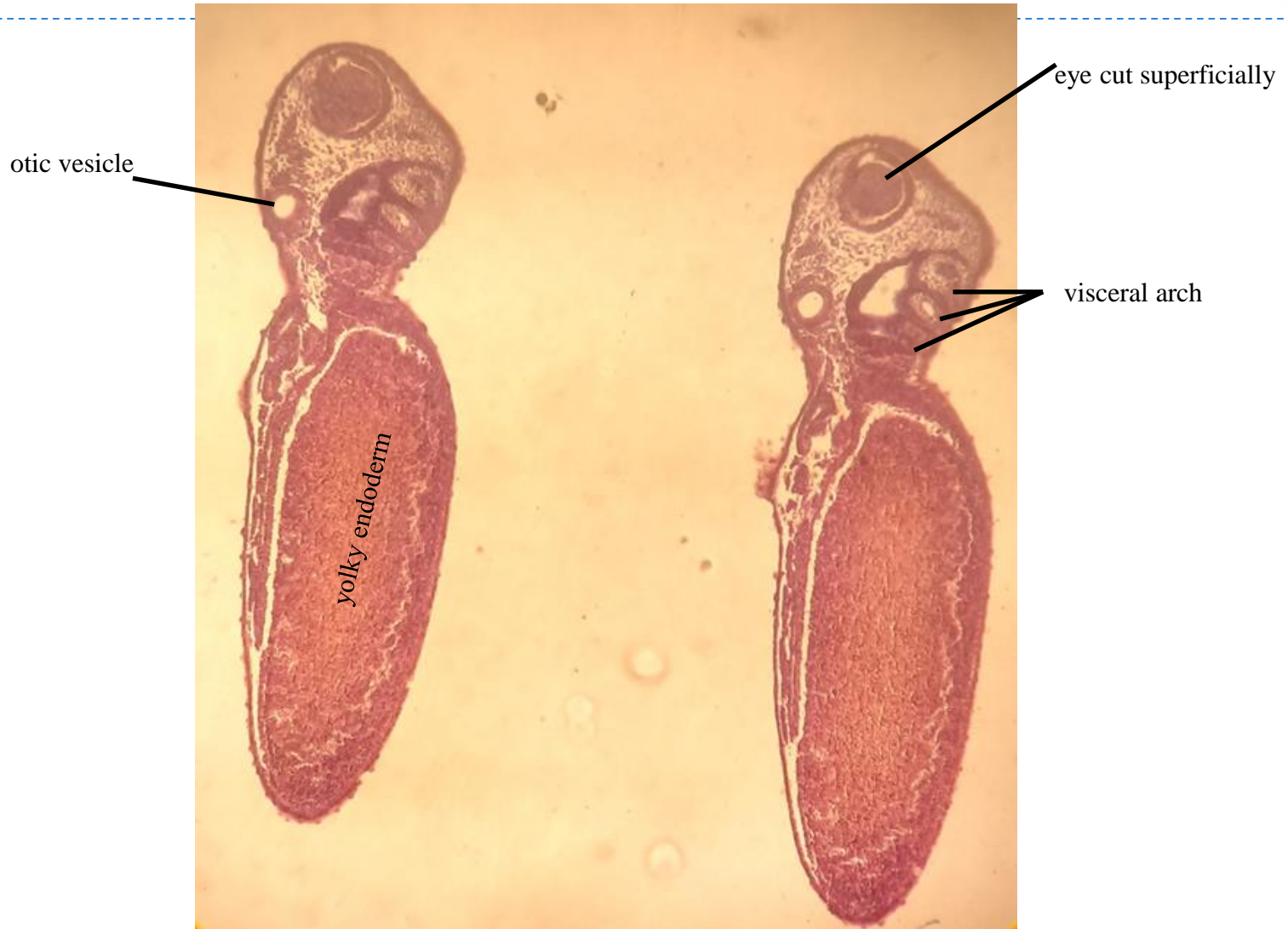
STAGE NUMBER		STAGE NUMBER		STAGE NUMBER	
AGE-HOURS AT 18°C		AGE-HOURS AT 18°C		AGE-HOURS AT 18°C	
1	0	7	7.5	13	50
	UNFERTILIZED		32-CELL		NEURAL PLATE
2	1	8	16	14	62
	GRAY CRESCENT		MID-CLEAVAGE		NEURAL FOLDS
3	3.5	9	21	15	67
	TWO-CELL		LATE CLEAVAGE		ROTATION
4	4.5	10	26	16	72
	FOUR-CELL		DORSAL LIP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

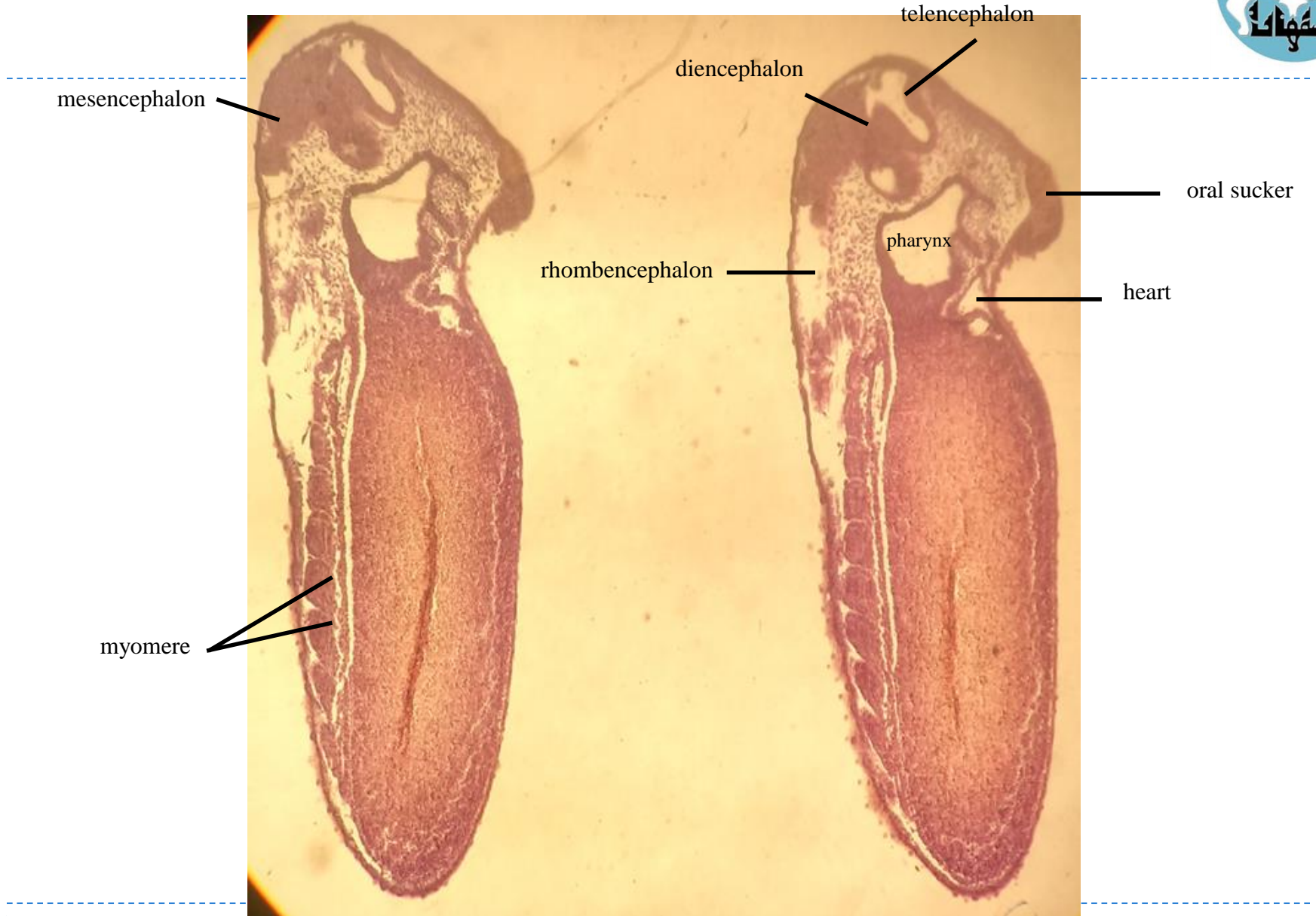


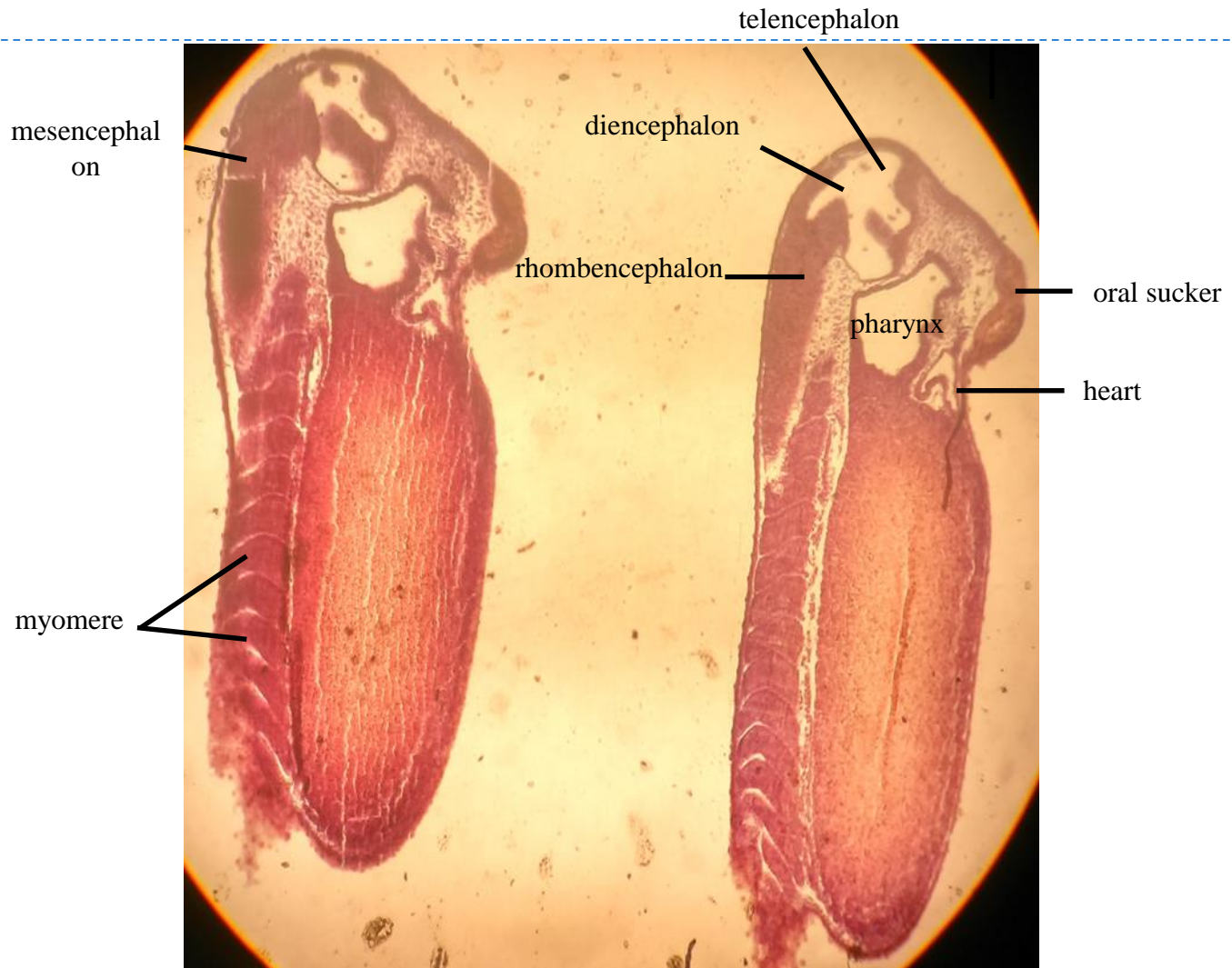
STAGE NUMBER		AGE IN HOURS AT 18° CENTIGRADE		LENGTH IN MILLIMETERS	
18	96	4			
				MUSCULAR RESPONSE	
19	118	5			
				HEART BEAT	
20	140	6			
				GILL CIRCULATION	HATCHING
21	162	7			
				MOUTH OPEN	CORNEA TRANSPARENT
22	192	8			
				TAIL FIN CIRCULATION	

▶ Stage 21, 162 hpf, 7 mm

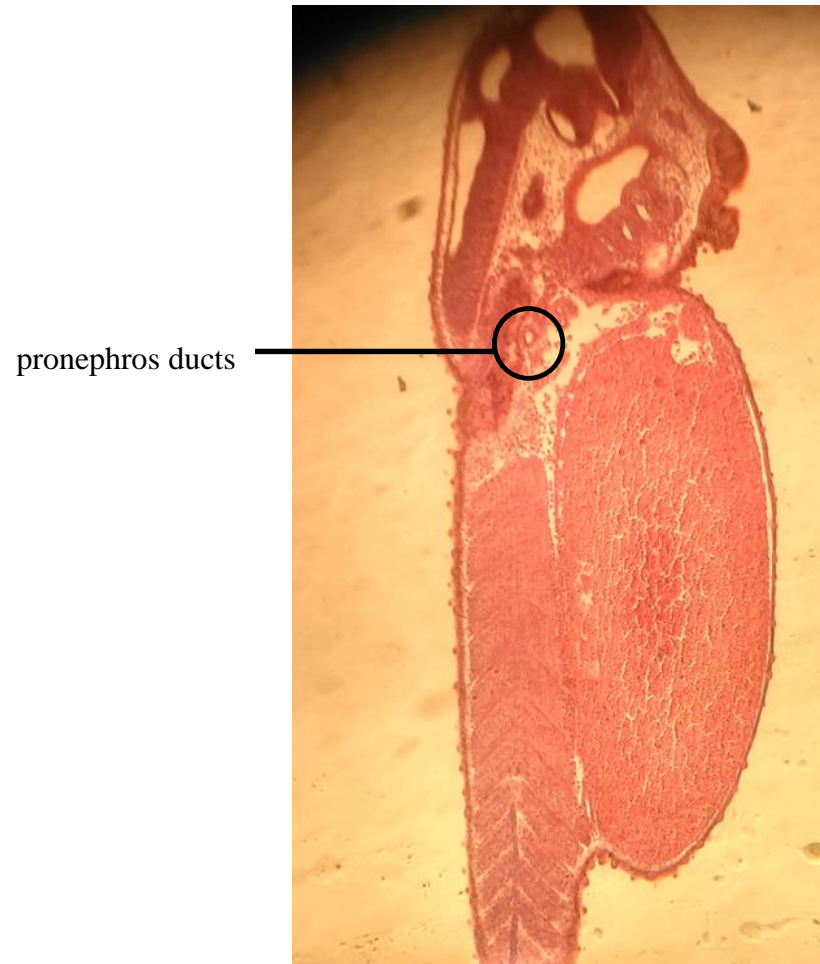
- ▶ مرحله گذار از لارو به tadpole
- ▶ دهان به بیرون باز می شود
- ▶ عدسی دیده می شود و قرنیه شفاف می شود
- ▶ وزیکول های مغزی تکوین بیشتری می یابند و نیمکره های مغزی تشکیل می شوند
- ▶ پیچ خوردگی لوله قلبی انجام می گیرد

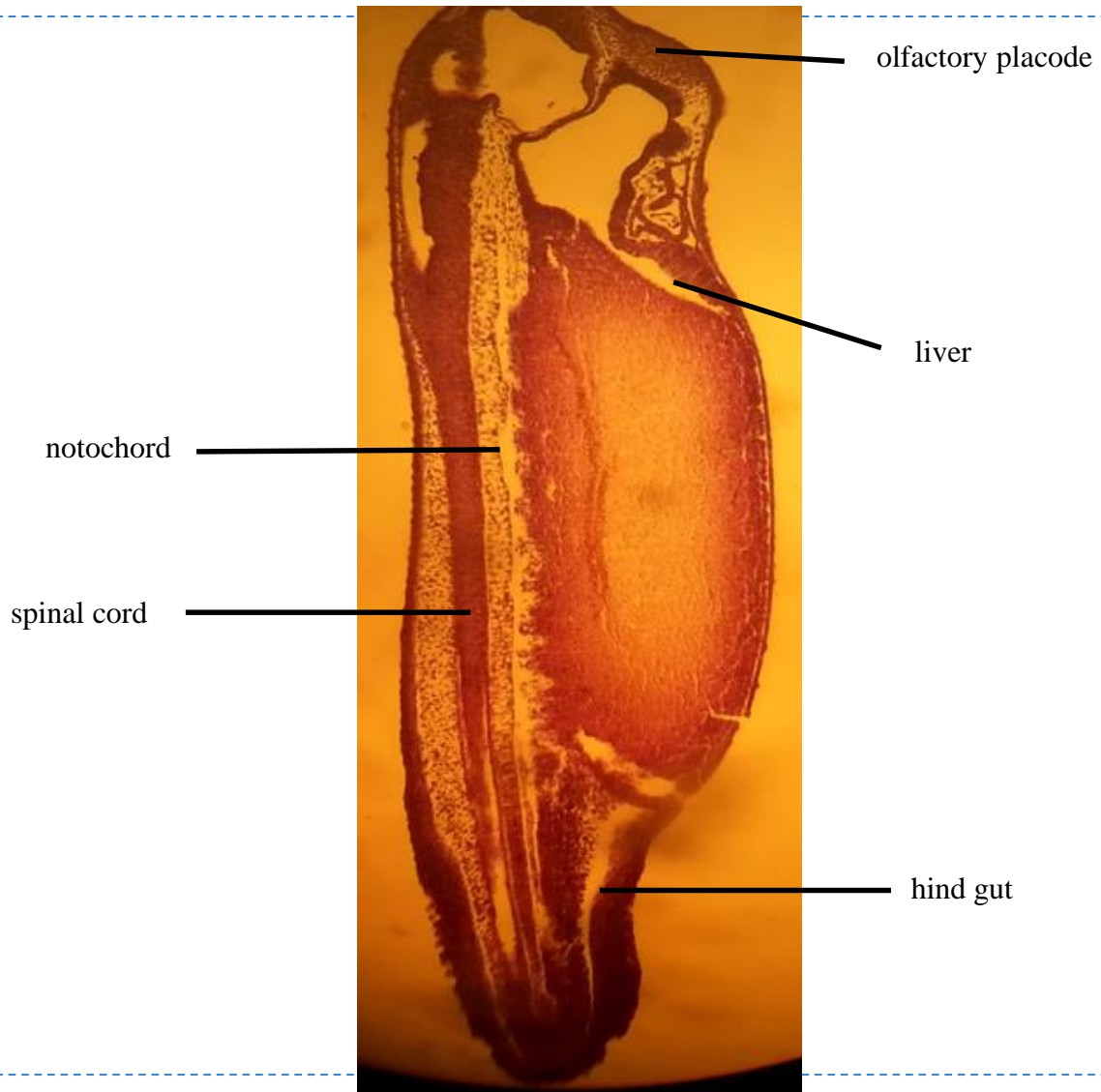




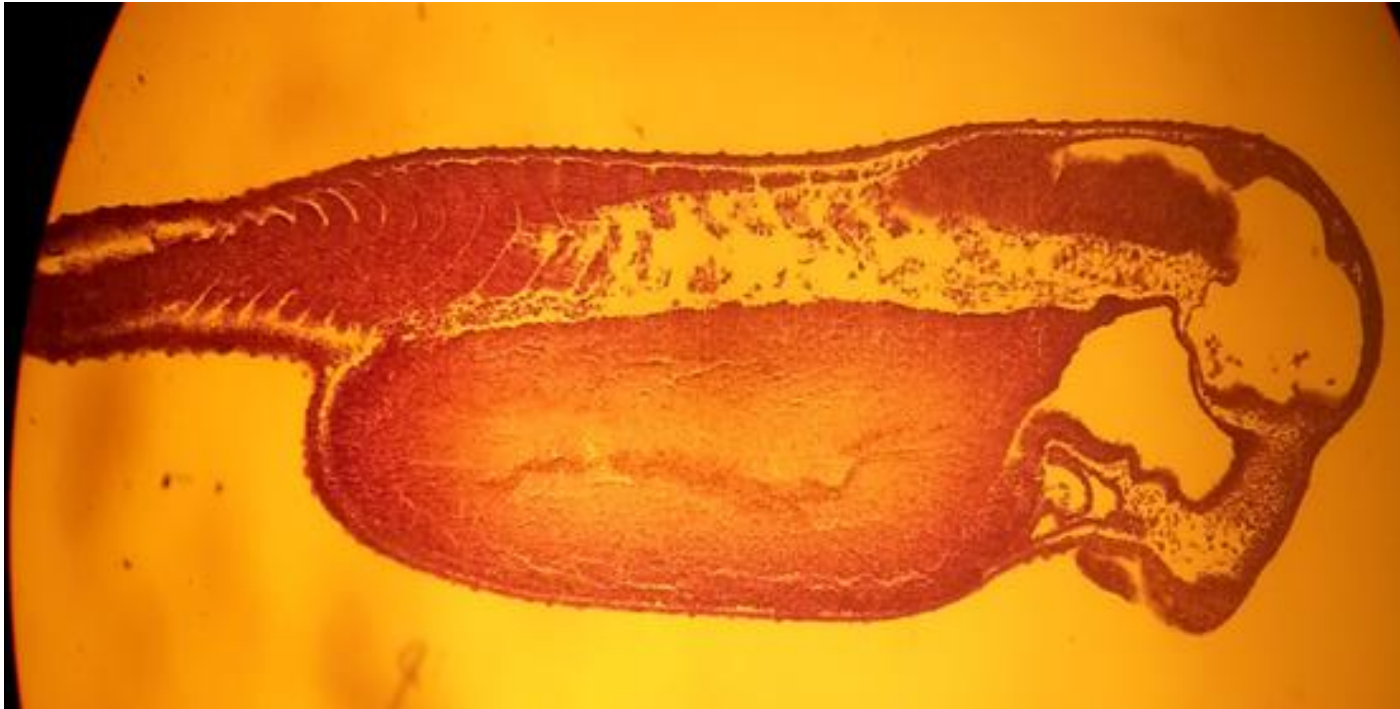








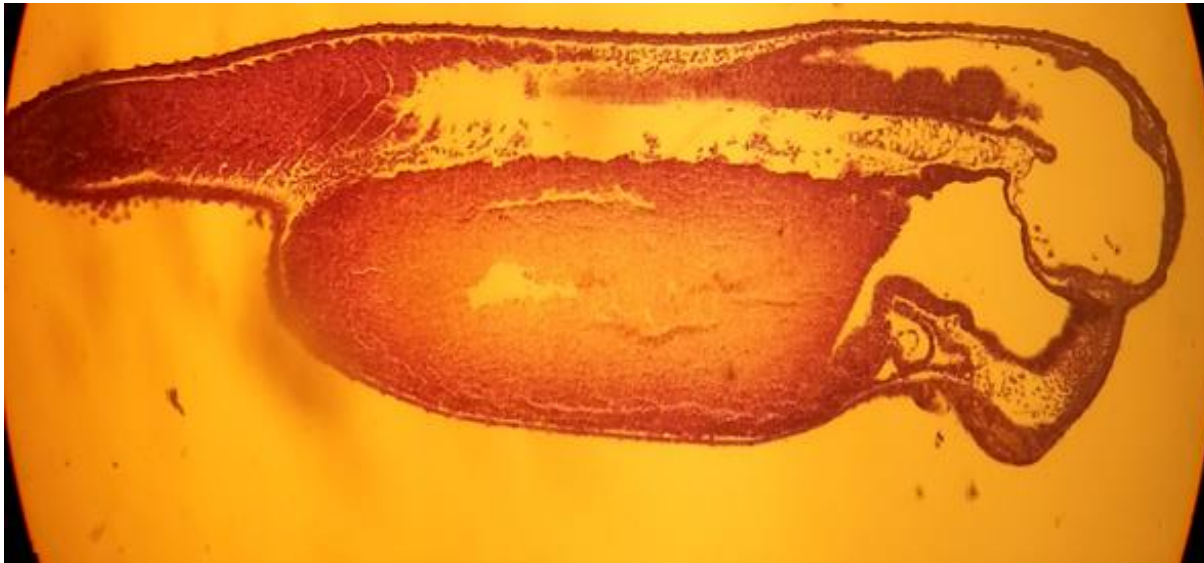
Quiz time!



■ name different part



Quiz time!



■ name different part