

# Comparative Anatomy and Developmental Biology of Vertebrates - I

Lesson Plan  
Session 2019-20

Class: **B.Sc I (Medical)**  
Subject: **ZOOLOGY**  
Semester-2nd  
**PAPER-1**

Session 2019-20

Practical

Date	UNIT-1	Lecture	Topic of Lecture	
01.01.2020		1.	Introduction (Integumentary System)	Introduction (osteology)
02.01.2020			Guru Gobind Singh Jayanti	
03.01.2020		2.	Skin Derivatives - Glands	
04.01.2020		3.	Comparative Anatomy of Glands	
05.01.2020			Sunday	
06.01.2020		4.	Comparative Anatomy of Scales	Disarticulated Skeleton of Fow (osteology)
07.01.2020		5.	Feathers	
08.01.2020		6.	Hair, Hoorns, Beak & Bills	
09.01.2020		7.	Doubt Class	
10.01.2020		8.	Test.	
11.01.2020		9.	Evolution of Visceral Arches	
12.01.2020			Sunday	
13.01.2020		10.	Jaw Suspension in Vertebrates	Disarticulated Skeleton of Rabbit
14.01.2020	UNIT-2	11.	Introduction (Alimentary Canal)	
15.01.2020		12.	Comparative Anatomy of A.C.	
16.01.2020		13.	Comparative anatomy of digestive Glands	
17.01.2020		14.	Gills	
18.01.2020		15.	Lungs	
19.01.2020			Sunday	
20.01.2020		16.	Air Sac and Swim Bladder	Carapace of turtle
21.01.2020		17.	Doubt class	
22.01.2020		18.	Test	
23.01.2020		19.	Assignment Work-1	
24.01.2020	UNIT-3	20.	Introduction (Heart)	
25.01.2020		21.	Comparative anatomy of Heart	
26.01.2020			Sunday/Republic Day	
27.01.2020		22.	Evolution of heart in Vertebrates	Plastron of Turtle.
28.01.2020		23.	Evolution of Aortic Arches	
29.01.2020		24.	Doubt Class	
30.01.2020			Basant Purnima/Shri Chhotu Ram Jayanti	
31.01.2020		25.	Test	
01.02.2020		26.	Vertebrate kidney.	
02.02.2020			Sunday	

03.02.2020	27.	Evolution of Kidney	Mammalian Skull
04.02.2020	28.	Comparative account of kidney	(Herbivore animal)
05.02.2020	29.	Evolution of Urinogenital ducts	
06.02.2020	30.	Cloaca and its derivative	
07.02.2020	31.	Common Copulatory Organ	
08.02.2020	32.	Doubt class	
09.02.2020		Sunday/Guru Ravidas's Birthday	
10.02.2020	33.	Test	Mammalian skull
11.02.2020	UNIT-4	34. Embryonic development of CNS	(Carnivore animal)
12.02.2020	35.	Comparative account of Brain	
13.02.2020			
14.02.2020		Unit Test	
15.02.2020			
16.02.2020		Sunday	
17.02.2020	36.	Brain of Teleosts, Amphibians	Permanent slide of stages of cleavage (Frog)
18.02.2020	37.	Brain of Reptiles, Birds	
19.02.2020	38.	Brain in Mammals	
20.02.2020	39.	Sense Organs - Eye	
21.02.2020		Maha Shivratri	
22.02.2020	40.	Ear	
23.02.2020		Sunday	
24.02.2020	41.	Olfactory organs, Gustatoreceptors	Blastula stages of Frog (P.S)
25.02.2020	42.	Skin Receptors	
26.02.2020	43.	Assignment Work-2	
27.02.2020	44.	Gametogenesis	
28.02.2020	45.	Spermatogenesis + oogenesis	
29.02.2020	46.	Vitellogenesis.	
01.03.2020		Sunday	
02.03.2020	47.	Fertilization, Mechanism of Fertilization	Gastrula, Neurula Tail bud stage of frog.
03.03.2020	48.	Blocks to polyspermy	
04.03.2020	49.	Patterns of cleavage	
05.03.2020	50.	Early development of Frog	
06.03.2020	51.	Cleavage + Blastulation	
07.03.2020	52.	Gastrulation	
08.03.2020			
09.03.2020			
10.03.2020			
11.03.2020			
12.03.2020		Holi Break	

13.03.2020  
14.03.2020  
15.03.2020

16.03.2020	53.	Early development of Human - Cleavage
17.03.2020	54.	Fate maps
18.03.2020	55.	Gastrular movements
19.03.2020	56.	Post Gastrulation dev. of Frog
20.03.2020	57.	Implantation of Embryo (Mammals)
21.03.2020	58.	Placentation

Tadpole external and internal gill stages.

22.03.2020 Sunday  
23.03.2020 Shahidi Diwas

24.03.2020	59.	Test
25.03.2020	60.	Doubt Class
26.03.2020	61.	Human Placenta
27.03.2020	62.	Metamorphosis in Frog
28.03.2020	63.	Changes in Metamorphosis

study of diff. types of Placenta

29.03.2020 Sunday

30.03.2020	64.	Doubt Class
31.03.2020	65.	Test
01.04.2020	66.	Assignment Work-3

Photomicrographs of Placenta.

02.04.2020 Ram Navmi

03.04.2020	67.	Embryonic Gene Activation
04.04.2020	68.	Mechanism of Cellular Determination

05.04.2020 Sunday

06.04.2020 Mahavir Jayanti

07.04.2020	69.	Neural Induction
08.04.2020	70.	Embryonic Induction
09.04.2020	71.	Differentiation - Origin
10.04.2020	72.	Differentiation of Germ layers
11.04.2020	73.	Doubt class.

Study of Placental development in humans

12.04.2020 Sunday

13.04.2020	74.	Test
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14.04.2020 Dr. B.R. Ambedkar's Jayanti

15.04.2020	75.	Intercellular interaction
16.04.2020	76.	Gap Junction
17.04.2020	77.	Cell movement, Cell death
18.04.2020	78.	Apoptosis Mechanism

Permanent slide of Frog sperm & egg.

19.04.2020 Sunday

20.04.2020	79.	Necrosis.
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Permanent slide of Rat sperm & egg.

21.04.2020	80.	Assignment Work - 4	Revision
22.04.2020	81.	Cellular changes in Necrosis	
23.04.2020	82.	Doubt class	
24.04.2020	83.	Test	
25.04.2020	84.	Revision	
26.04.2020		Sunday	
27.04.2020	85.	Revision	Revision
28.04.2020	86.	Revision	
29.04.2020	87.	Doubt class	
30.04.2020	88.	Doubt class	