

B.Sc.II (SemIII)	
ZOOLOGY Paper 4 S ADVANCED GENETICS AND ANIMAL ECOLOGY	
UNIT I : Concept of genes	
Mendel's laws of hereditary – Monohybrid – Laws of dominance, law	https://youtu.be/zuTVnldGyiA
Dihybrid cross – Law of independent assortment.	https://youtu.be/Pap_TcqTatQ
Interactions of genes: , Supplementary factor, complementary factor,	https://youtu.be/3g08DtOzdtk
duplicates factor, inhibitory factors	https://youtu.be/_n1we4x0TG0
lethal factors – dominant and recessive.	https://youtu.be/2Uj0RSFFbGI
	https://youtu.be/i5epMU4BVq0
UNIT II :	
Linkage - Types of linkage,	https://youtu.be/ZYi_oAOez4w
linkage group,	https://youtu.be/SfaviPhOKEA
arrangement of linked genes, and significance of linkage	https://youtu.be/pszm5isU94c
Crossing over – Mitotic and meiotic crossing over,	https://youtu.be/ehh2XhqKpCU
Mechanism of crossing over,	https://youtu.be/84yx5g4X7X8
theories of crossing over – Darlington's theory,	https://youtu.be/qP4BWWFiuag
breakage and exchange theory, and copy choice theory	https://youtu.be/HdkkD-2xKbo
Types of crossing over – Single, double and multiple crossing overs	https://youtu.be/HkGoNhfvMLQ
Factors affecting crossing over,	https://youtu.be/TMYZu8JE-f0
Significance of crossing over.	https://youtu.be/gULj-r0Xnd0
Multiple alleles. Multiple alleles in relation to eye color in Drosophila.	https://youtu.be/OnvIWRIUmg
Blood group in man, Erythroblastosis foetalis	https://youtu.be/dzQ0bvQ4mAw
UNIT III : Sex determination:	
Autosomes and sex chromosomes,	https://youtu.be/wYQoB2FUF3o
Sex determination in animals	https://youtu.be/GS20UYL7n60
Chromosomal Theory	https://youtu.be/eaN30ArT4Vs
Genic Balance Theory.	https://youtu.be/hxKq9xRlv7g
Environmentally and hormonally controlled sex determination,	https://youtu.be/y2ePZ18DReU
Gynandromorphs	https://youtu.be/8r4BCLQgkdc
Genetic disorders; Sickle cell anemia	https://youtu.be/reBI59xwbvo

Huntington's chorea	https://youtu.be/_Amyx4f_8dA
Diabetes mellitus	https://youtu.be/m9u5umcc4NQ
Non-disjunction: Turner's syndrome, Klinefelter's syndrome, Down's syndrome	https://youtu.be/1_dMHPyJ_-w
Edward's Syndrome	https://youtu.be/pc1zRkMf-GA
Biochemical genetics:;Cystic fibrosis, Phenylketonuria, Albinism, Alkaptonuria	https://youtu.be/BKLkypo7NbQ
	https://youtu.be/0ZoVVEAPGAs
	https://youtu.be/YmEzQxOa1uw
Sex linked genetic disorders and their inheritance in man; Hemophilia	https://youtu.be/SWixT7d2Rto
UNIT IV : Genetic Screening and parental diagnosis:	
Parental, Carrier, Predictive, CVS (Chorionic Villous Sampling), Amniocentesis	https://youtu.be/EdoZZ41eySc
Human Heredity: - Inheritance of eye color. Skin color	https://youtu.be/yMN_wbRb38M
Recessive genes and consanguineous marriages	https://youtu.be/BZzMRJv_mT8
Genetic counseling: - Risk of marriages in affected family.	https://youtu.be/pe7QijVKaOc
Birth control measures (male and female).	https://youtu.be/SYOKQc8XwYw
Kinds of twins: - Identical, Fraternal, Siamese twins.	https://youtu.be/CjbXpLdv18s
Significance of twins study	https://youtu.be/m8FwAvEIZDg
UNIT V :	
Ecology: concept and scope:Abiotic factors	https://youtu.be/H83d1ZK2wpU
Biotic factors	https://youtu.be/yAWnZsItAI0
Intra specific and interspecific associations	https://youtu.be/fQYmDxBnHn0
UNIT VI : Ecosystem:	
Relationship between habitat and ecological niche -	https://youtu.be/lgWHwl1-d9c
Autotrophic and heterotrophic producer	https://youtu.be/-zq779kNXtU
energy flow in an ecosystem - food chain - food web - pyramids - Ecotones	https://youtu.be/tNeE2OKHnWw
Terrestrial ecosystem:	https://youtu.be/ew_F0gYUuno
Fresh water ecosystem	https://youtu.be/j75hPLN2B7g
Marine ecosystem:	https://youtu.be/Ed_JQMbE_dY
Estuarine ecology:	https://youtu.be/xWk6Bb1ComI