

SEVA BHARATI MAHAVIDYALAYA

Vill. & P.O.-Kaggari : P.S.- Jamboni : Dist.- Jhargram (W.B.): Pin.-721507

LESSON PLAN (DEPARTMENT : ZOOLOGY)

Semester	Programme	Course & Paper	Topic Wise Division	Teacher Name	Hours (Per Session)
Sem 1	General	CC 1: Animal Diversity	Unit 1: Kingdom Protista	Sudipta patihar	6 Hours/ Week
			Unit 2: Phylum Porifera		
			Unit 3: Phylum Cnidaria		
			Unit 4: Phylum Platyhelminthes		
			Unit 5: Phylum Nemathelminthes		
			Unit 6: Phylum Annelida		
			Unit 7: Phylum Arthropoda		
			Unit 8: Phylum Mollusca		
			Unit 9: Phylum Echiondermata		
			Unit 10: Prochordates		
			Unit 11: Agnatha		
			Unit 12: Pisces		
			Unit 13: Amphibia		
			Unit 14: Reptiles		
			Unit 15: Aves		
			Unit 16: Mammals		

Reference:- 1. Ruppert and Barnes, R.D. (2006). Invertebrate Zoology, VIII Edition. Holt Saunders International Edition

2. Young, J.Z. (2004). The Life of Vertebrates, III Edition. Oxford university press

3. Pough H. Vertebrate Life, VIII Edition, Pearson International.

4. Hall B.K. and Hallgrimsson B. (2008). Strickberger's Evolution. IV Edition. Jones and Bartlett Publishers Inc.



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Semester	Programme	Course & Paper	Topic Wise Division	Teacher Name	Hours (Per Session)
Sem 2	General	CC 2: Comparative Anatomy and Developmental Biology of Vertebrates	Unit 1: Integumentary System	Sudipta patihar	6 Hours/ Week
			Unit 2: Skeletal System		
			Unit 3: Digestive System		
			Unit 4: Respiratory System		
			Unit 5: Circulatory System		
			Unit 6: Urinogenital System		
			Unit 7: Nervous System		
			Unit 8: Sense Organs		
			Unit 9: Early Embryonic Development		
			Unit 10: Late Embryonic Development		
			Unit 11: Control of Development		

- Reference:-**
1. Kardong, K.V. (2005) Vertebrates' Comparative Anatomy, Function and Evolution. IV Edition. McGraw-Hill Higher Education.
 2. Kent, G.C. and Carr R.K. (2000). Comparative Anatomy of the Vertebrates. IX Edition. The McGraw-Hill Companies.
 3. Hilderbrand, M and Gaslow G.E. Analysis of Vertebrate Structure, John Wiley and Sons.
 4. Carlson, Bruce M (1996). Patten's Foundations of Embryology, McGraw Hill, Inc.



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Semester	Programme	Course & Paper	Topic Wise Division	Teacher Name	Hours (Per Session)
Sem 3	General	CC 3: Physiology and Biochemistry	Unit 1: Nerve and muscle	Sudipta patihar	6 Hours/ Week
			Unit 2: Digestion		
			Unit 3: Respiration		
			Unit 4: Excretion		
			Unit 5: Cardiovascular system		
			Unit 6: Reproduction and Endocrine Glands		
			Unit 7: : Carbohydrate Metabolism		
			Unit 8: Lipid Metabolism		
			Unit 9: Protein metabolism		
			Unit 10: Enzymes		

- Reference:-**
1. Tortora, G.J. and Derrickson, B.H. (2009). Principles of Anatomy and Physiology, XII Edition, John Wiley & Sons, Inc.
 2. Widmaier, E.P., Raff, H. and Strang, K.T. (2008) Vander's Human Physiology, XI Edition., McGraw Hill
 3. Guyton, A.C. and Hall, J.E. (2011). Textbook of Medical Physiology, XII Edition, Harcourt Asia Pvt. Ltd/ W.B. Saunders Company
 4. Berg, J. M., Tymoczko, J. L. and Stryer, L. (2006). Biochemistry. VI Edition. W.H Freeman and Co.



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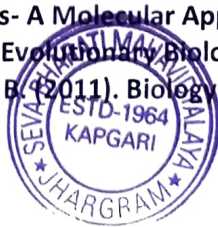
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LESSON PLAN (DEPARTMENT : ZOOLOGY)

Semester	Programme	Course & Paper	Topic Wise Division	Teacher Name	Hours (Per Session)
Sem 4	General	CC 4: Genetics and Evolutionary Biology	Unit 1: Introduction to Genetics	Sudipta patihar	6 Hours/ Week
			Unit 2: Mendelian Genetics and its Extension		
			Unit 3: Linkage, Crossing Over and Chromosomal Mapping		
			Unit 4: Mutations		
			Unit 5: Sex Determination		
			Unit 6: History of Life		
			Unit 7: Introduction to Evolutionary Theories		
			Unit 8: Direct Evidences of Evolution		
			Unit 9: Processes of Evolutionary Change		
			Unit 10: Species Concept		
			Unit 11: Macro-evolution		
			Unit 12: Extinction		

- Reference:-**
1. Gardner, E.J., Simmons, M.J., Snustad, D.P. (2008). Principles of Genetics. VIII Edition. Wiley India.
 2. Snustad, D.P., Simmons, M.J. (2009). Principles of Genetics. V Edition. John Wiley and Sons Inc.
 3. Klug, W.S., Cummings, M.R., Spencer, C.A. (2012). Concepts of Genetics. X Edition. Benjamin Cummings.
 4. Russell, P. J. (2009). Genetics- A Molecular Approach. III Edition. Benjamin Cummings.
 5. Douglas, J. Futuyma (1997). Evolutionary Biology. Sinauer Associates.
 6. Campbell, N. A. and Reece J. B. (2011). Biology. IX Edition, Pearson, Benjamin, Cummings.



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Skill Enhancement Courses (SEC)

Semester	Programme	Course & Paper	Topic Wise Division	Teacher Name	Hours (Per Session)
Sem 5	General	SEC-3: Medical Diagnostics	Unit 1: Introduction to Medical Diagnostics and its Importance	Sudipta patihar	6 Hours/ Week
			Unit 2: Diagnostics Methods Used for Analysis of Blood		
			Unit 3: Diagnostic Methods Used for Urine Analysis		
			Unit 4: Non-infectious Diseases		
			Unit 5: Infectious Diseases		
			Unit 6: Tumours		

- Reference:**
1. Park, K. (2007), Preventive and Social Medicine, B.B. Publishers
 2. Godkar P.B. and Godkar D.P. Textbook of Medical Laboratory Technology, II Edition, Bhalani Publishing House
 3. Cheesbrough M., A Laboratory Manual for Rural Tropical Hospitals, A Basis for Training Courses
 4. Guyton A.C. and Hall J.E. Textbook of Medical Physiology, Saunders




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Semester	Programme	Course & Paper	Topic Wise Division	Teacher Name	Hours (Per Session)
Sem 5	General	DSE- 1: Aquatic biology	Unit 1: Aquatic Biomes	Sudipta patihar	6 Hours/ Week
			Unit 2: Freshwater Biology		
			Unit 3: Marine Biology		
			Unit 4: Management of Aquatic Resources		

- Reference:-**
1. Anathkrishnan : Bioresources Ecology 3rd Edition
 2. Goldman : Limnology, 2nd Edition
 3. Odum and Barrett : Fundamentals of Ecology, 5th Edition
 4. Pawlowski : Physicochemical Methods for Water and Wastewater Treatment, 1st Edition
 5. Wetzel : Limnology, 3rd edition
 6. Trivedi and Goyal : Chemical and biological methods for water pollution studies




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Semester	Programme	Course & Paper	Topic Wise Division	Teacher Name	Hours (Per Session)
Sem 6	General	DSE-2 Reproductive Biology	Unit 1: Reproductive Endocrinology	Sudipta patihar	6 Hours/ Week
			Unit 2: Functional anatomy of male reproduction		
			Unit 3: Functional anatomy of male reproduction		
			Unit 4: Reproductive Health		

- Reference:-
1. Austin, C.R. and Short, R.V. reproduction in Mammals. Cambridge University Press
 2. Degroot, L.J. and Jameson, J.L. (eds). Endocrinology. W.B. Saunders and Company.
 3. Knobil, E. et al. (eds). The Physiology of Reproduction. Raven Press Ltd.
 4. Hatcher, R.A. et al. The Essentials of Contraceptive Technology. Population Information Programme.




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