MHARANA PRATAP P.G. COLLEGE, JUNGLE DHUSAN, GORAKHPUR

Class: B.Sc. VI Semester Theory: 2024-25 Subject: Zoology

| Date | Lecture No. | Teacher's Name | Unit | Chapter | Topic |
|----------|----------------|-------------------|------|--|---|
| 16.01.25 | 1 | R.N.Singh | 1 | Theories of Evolution | Origin of Life |
| 17.01.25 | 1 | SK | 1 | Introduction to Ecology | History of ecology |
| 18.01.25 | 2 | R.N.Singh | 2 | Population Genetics | Microevolution and Macroevolution: allele frequencies, genotype frequencies, |
| 20.01.25 | | SK | СТ | СТ | |
| 21.01.25 | 3 | R.N.Singh | 2 | Organization of Ecosystem | Levels of organization, Laws of limiting factors Study of physical factors |
| 22.01.25 | 2 | SK | 3 | Direct Evidences of Evolution | Types of fossils, |
| 23.01.25 | 4 | R.N.Singh | 3 | Community Ecology | Community characteristics: species richness |
| 24.01.25 | 3 | SK | 4 | Species Concept and Extinction | Biological species concept (Advantages and Limitations) |
| 25.01.25 | 5 | R.N.Singh | 4 | Environmental Hazards | Sources of Environmental hazards |
| 27.01.25 | | SK | CT | СТ | |
| 28.01.25 | 6 | R.N.Singh | 5 | Gamete Fertilization and Early Development | Gametogenesis, Fertilization |
| 29.01.25 | 4 | SK | 5 | Effects of Climate Change | Effect of climate change on public health |
| 30.01.25 | 7 | R.N.Singh | 6 | Developmental Genes | Genes and development |
| 31.01.25 | 5 | SK | 6 | Behavioural Ecology and Chronobiology | Origin and history of Ethology |
| 1.02.25 | 8 | R.N.Singh | 7 | Early Vertebrate Development | Early development of vertebrates (fish, birds & mammals) |
| 4.02.25 | | SK | СТ | СТ | , |
| 5.02.25 | 9 | R.N.Singh | 7 | Introduction to Wild Life | Values of wild life - positive and negative |
| 6.02.25 | 6 | SK | 8 | Late Developmental Processes | The dynamics of organ development Development of eye, kidney, limb |
| 7.02.25 | 10 | R.N.Singh | 8 | Protected areas | National parks & sanctuaries, Community reserve |
| 8.02.25 | 7 | SK | 1 | Theories of Evolution | Lamarckism, Darwinism |
| 10.02.25 | 11 | R.N.Singh | 1 | Introduction to Ecology | Autecology and synecology Levels of organization |
| 11.02.25 | | SK | ME | ME | |
| 13.02.25 | 12 | R.N.Singh | 2 | Population Genetics | Hardy Weinberg equilibrium and conditions for its maintenance |

| 14.02.25 | 8 | SK | 2 | Organization of Ecosystem | Population: Density, natality, mortality, life tables, fecundity tables, survivorship curves, age ratio, sex ratio, dispersal and dispersion, Exponential and logistic growth, |
|----------|----|-----------|----|---|--|
| 15.02.25 | 13 | R.N.Singh | 3 | Direct Evidences of Evolution | Incompleteness of fossil record, |
| 17.02.25 | 9 | SK | 3 | Community Ecology | dominance diversity, abundance |
| 18.02.25 | 14 | R.N.Singh | 4 | Species Concept and Extinction | Modes of speciation(Allopatric, Sympatric) |
| 19.02.25 | | SK | CT | СТ | |
| 20.02.25 | 15 | R.N.Singh | 4 | Environmental Hazards | Climate changes |
| 21.02.25 | 10 | SK | 5 | Gamete Fertilization and Early Development | Cleavage pattern, Gastrulation, fate maps |
| 22.02.25 | 16 | R.N.Singh | 5 | Effects of Climate Change | Sources of waste, types and characteristics Sewage disposal and its management, Solid waste disposal, Biomedical waste handling and disposal |
| 24.02.25 | 17 | R.N.Singh | 6 | Developmental Genes | Genes and development |
| 25.02.25 | 11 | SK | 6 | Behavioural Ecology and Chronobiology | Instinct vs. Learnt Behaviour |
| 27.02.25 | 18 | R.N.Singh | СТ | СТ | |
| 28.02.25 | | SK | 7 | Early Vertebrate Development | Early development of vertebrates (fish, birds & mammals) |
| 1.03.25 | 19 | R.N.Singh | 7 | Introduction to Wild Life | Conservation ethics |
| 3.03.25 | 12 | SK | 8 | Late Developmental Processes | Metamorphosis: the hormonal reactivation of development in amphibians, insects |
| 4.03.25 | 20 | R.N.Singh | 8 | Protected areas | Important features of protected areas in India |
| 5.03.25 | 13 | SK | 1 | Theories of Evolution | Natural, Sexual and Artifical selection |
| 6.03.25 | 21 | R.N.Singh | ME | ME | |
| 7.03.25 | 14 | SK | 1 | Introduction to Ecology | Autecology and synecology Levels of organization |
| 8.03.25 | 22 | R.N.Singh | 2 | Population Genetics | Hardy Weinberg equilibrium and conditions for its maintenance |
| 10.03.25 | 15 | SK | 2 | Organization of Ecosystem | Population: Density, natality, mortality, life tables, fecundity tables, survivorship curves, age |

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|---------------------|----|--------------|----|-----------------------------------|---|
| | | | | | ratio, sex ratio, dispersal and dispersion, |
| | | | | | Exponential and logistic |
| | | | | | growth, |
| 11.03.25 | 23 | R.N.Singh | 3 | Direct Evidences of Evolution | Incompleteness of fossil |
| 11.03.23 | 23 | Tur visingii | | Direct Evidences of Evolution | record, |
| 17.03.25 | 16 | SK | 3 | Community Ecology | dominance diversity, |
| 17.03.23 | | | | Community Ecology | abundance |
| 18.03.25 | 24 | R.N.Singh | СТ | СТ | |
| 19.03.25 | 17 | SK | 4 | Species Concept and Extinction | Mass extinction (Causes, |
| | | | | | Names of five major |
| | | | | | extinctions) |
| 20.03.25 | 25 | R.N.Singh | 4 | Environmental Hazards | Greenhouse gases and |
| | | | | | global warming |
| 21.03.25 | 18 | SK | 5 | Gamete Fertilization and Early | Developmental mechanics |
| | | | | Development | of cell specification |
| 22.03.25 | 26 | R.N.Singh | 5 | Effects of Climate Change | Nuclear waste handling |
| | | | | | and disposal, Waste from |
| | | | | | thermal power plants, |
| 1.04.25 | 19 | SK | 6 | Developmental Genes | Molecular basis of |
| | | | | · | development |
| 2.04.25 | 27 | R.N.Singh | СТ | СТ | |
| 3.04.25 | 20 | SK | 6 | Behavioural Ecology and | Associative learning, |
| | | | | Chronobiology | classical and operant |
| | | | | | conditioning, Habituation, |
| | | | | | Imprinting |
| 4.04.25 | 28 | R.N.Singh | 7 | Early Vertebrate Development | Metamorphosis, |
| | | | | | regeneration and stem |
| | | | | | cells |
| 5.04.25 | 21 | SK | 7 | Introduction to Wild Life | Importance of |
| | | | | | conservation, |
| | | | | | Causes of depletion |
| 7.04.25 | 29 | R.N.Singh | 8 | Late Developmental Processes | Regeneration: salamander |
| | | | | | limbs, mammalian liver, |
| | | | | | Hydras, Aging: the biology |
| 0.04.35 | 22 | CIZ | | 5 | of senescence |
| 8.04.25 | 22 | SK | 8 | Protected areas | Tiger conservation - Tiger |
| | | | | | reserves in India, |
| | | | | | Management challenges in |
| 9.04.25 | 30 | R.N.Singh | СТ | СТ | Tiger reserve |
| 9.04.25 11.04.25 | 23 | SK | 1 | Theories of Evolution | Modern synthetic theory |
| 11.04.23 | 23 | SIX | 1 | THEORIES OF EVOLUTION | Modern synthetic theory of evolution, Patterns of |
| | | | | | evolution (Divergence, |
| | | | | | Convergence Parallel, |
| | | | | | Coevolution) |
| 12.04.25 | 31 | R.N.Singh | 1 | Introduction to Ecology | Laws of limiting factors |
| | | | - | 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | Study of physical factors |
| 15.04.25 | 24 | SK | 2 | Population Genetics | Forces of evolution: |
| | | | | | mutation, selection, |
| | | | | | genetic drift |
| 16.04.25 | 32 | R.N.Singh | 2 | Organization of Ecosystem | Types of ecosystems with |

| | | | | | one example in detail, Food chain: Detritus and grazing food chains,, Food web, Energy flow through the ecosystem, Ecological pyramids and Ecological efficiencies, Nutrient and biogeochemical cycle with |
|----------|----|-----------|----|--|--|
| | | | | | one example of Carbon cycle |
| 17.04.25 | 25 | SK | 3 | Direct Evidences of Evolution | Dating of fossils, Phylogeny of horse |
| 19.04.25 | 33 | R.N.Singh | ME | ME | |
| 21.04.25 | 26 | SK | 3 | Community Ecology | Ecological succession with one example |
| 22.04.25 | 34 | R.N.Singh | 4 | Species Concept and Extinction | Mass extinction (Causes, Names of five major extinctions) |
| 23.04.25 | 27 | SK | 4 | Environmental Hazards | Acid rain, Ozone layer destruction |
| 24.04.25 | 35 | R.N.Singh | 5 | Gamete Fertilization and Early Development | Morphogenesis and cell adhesion |
| 25.04.25 | 28 | SK | 5 | Effects of Climate Change | Case histories on Bhopal gas tragedy, Chernobyl disaster, Seveso disaster and Three Mile Island accident and their aftermath. |
| 26.04.25 | 36 | R.N.Singh | CT | СТ | |
| 28.04.25 | 29 | SK | 6 | Developmental Genes | Differential gene expression |
| 29.04.25 | 37 | R.N.Singh | 6 | Behavioural Ecology and Chronobiology | Circadian rhythms, Tidal rhythms and Lunar rhythms Chronomedicine |
| 30.04.25 | 30 | SK | 7 | Early Vertebrate Development | Environmental regulation of development |