भारतीय वन्यजीव संस्थान
Wildlife Institute of India

(An Autonomous Institution of the Ministry of Environment, Forests & Climate Change, Govt. of India)

ANNOUNCEMENT

Ph.D. Eligibility Test for Saurashtra University in the discipline of Wildlife Science - 2020

The Wildlife Institute of India (WII) is a premier national institute for training and research in the field of wildlife conservation and management. The Institute's idyllic ambience, state of the art infrastructure, acclaimed and diverse faculty provide a vibrant academic atmosphere for scholarly work. The Institute has been regularly engaging research personnel for various research projects and also encourages its researchers to pursue their career in the field of 'Wildlife Science' by providing a platform to register for Ph.D. Degree through affiliation at Saurashtra University, Rajkot. In this regard, the Institute intends to conduct Ph.D. eligibility test for registration in the Ph.D. Program of Saurashtra University, Rajkot, in the discipline of Wildlife Science on **20th October 2019 (Sunday) at 11.00 hrs at Dehradun.**

I. Eligibility Criteria:

Masters' Degree in Life Science (Botany/Zoology/Forestry/Statistics/Experimental Biology/Environmental Science/Biological Science/Wildlife Science/Agriculture/ Veterinary Science) with 55% aggregate or above. There would be 5% relaxation in marks for the candidates belonging to the SC/ST and OBC category. Candidates appearing in the final examination of the Post Graduate Degree, shall also be eligible to apply for the Entrance Test, but their admission to Ph.D. course would be subject to qualifying the entrance test and production of final mark sheet in the same academic term/semester. Qualified candidates of UGC/CSIR (JRF) Examination/SLET/NET/GATE or who are the teacher fellowship holders/M.Phil. Degree holders shall be exempted from the Entrance Test for Ph.D. However, they have to register through online process for submission of their application and registration fee and would be required to go through the process of Department Research Committee (DRC) of Saurashtra University for seeking registration in the Ph.D. Program.

Age Limit: There is no fixed upper age limit for appearing in Ph.D. Entrance Test of Saurashtra University in the discipline of Wildlife Science.

Validity Period: The candidates who qualify Saurashtra University Ph.D. Entrance Test at WII can register for Ph.D. Degree within two years from the date of declaration of result.

II. PROCEDURE FOR APPLYING:

The candidates are required to apply online. The relevant link for registration will be made available from **1st September 2019**. Online submission of application will be allowed on the website up to **23:59 hrs on 30th September 2019**. Interested applicants, may refer institute's website **<www.wii.gov.in>** for details of instructions i.e. eligibility criteria, syllabus and examination centre(s) etc. No other mode of application shall be accepted. Candidates are required to go to the link provided for filling ONLINE application and fill up the personal details/BIO-DATA, fees etc. carefully. Before filling application online, candidates should keep ready a scanned copy of passport size photograph and signature in jpg/jpeg format (Photo size less than 500 KB and signature size less than 200 KB). Fill in the online form with all the relevant details. Upload scanned copy of the photograph and signature. Candidates should ensure that the relevant details *viz*., Name, Date of Birth, Address, etc. entered in application form should be correct. Downloading of admit card will start from **10th October 2019**. The date of examination is **20.10.2019 at Dehradun at 1100 hrs**. Examination Centre will be allotted on admit card through **M/s Armezo Solutions**.

III. GENERAL INSTRUCTIONS:

1 The duration of the Ph.D. entrance test will be 120 minutes. The question paper shall contain only 'Multiple Choice Questions. Qualifying eligibility marks will be as per UGC norms.

2 The examination fee is Rs. 1000 (Rs. One thousand only). Once the fee is paid, it will not be refunded under any circumstance. Candidates should satisfy themselves that they fulfill all the eligibility norms including educational qualification(s) as on date of submission of the application can apply for Ph.D. entrance test of Saurashtra University.

3 Candidates are advised to give specific, correct and complete information. All original certificates/documents in support of information furnished in the application form are to be produced at the time of interview/RDC at Wildlife Institute of India, Dehradun, failing which the candidate will be disqualified for appearing in interview. Candidature of the candidates is liable to be rejected at any stage of admission process or after admission, if any information provided by the candidates is found to be false or is not found in conformity with eligibility criteria mentioned in the advertisement.

4 For getting the benefit of reservation under OBC category, the name of caste and community of the candidate must appear in the central list of Other Backward Classes (OBC) available on National Commission for Backward Classes (NCBC), Government of India website www.ncbc.nic.in. Candidates seeking reservation as OBC, will have to submit non-creamy layer certificate at the time of interview in the prescribed format issued from the designated authority.

5 Mobile phones, pagers, calculators or any other communication devices are not allowed inside the premises where the examination is being conducted. Any infringement of these instructions shall entail disciplinary action including ban from

future examination conducted by the Institute. Candidates are advised in their own interest not to bring any of the banned items including mobile phones/pagers to the venue of the examination, as arrangement for safe-keeping cannot be assured.

IV. Examination Centre: Dehradun

V. Number of Seats Available: 20

Director, WII reserves the right to relax number of seats depending upon the requirements.

VI. Syllabus for Ph.D. Entrance Test

Paper would contain only 'Multiple Choice Questions (MCQ)' carrying equal marks. These questions shall be objective in nature and each will have four answers, out of which the candidate has to mark the correct answer. The duration of the examination is two hours. Subject-wise components are given below for reference:

Component	Subject	No. of Questions	Maximum Marks (100)
Component 1	English Language	15	15
Component 2	Computer Applications	15	15
Component 3	Research Aptitude (GA)	10	10
Component 4	Research Methodology	20	20
Component 5	Subject Knowledge	40	40

Component 1: English Language

Reading Comprehension (Answers of MCQs on the basis of comprehension of a passage), Vocabulary (Synonyms, Antonyms, One word for a phrase, Phrase for one word), Basic Grammar (Structure of Language), Improvement of the sentences.

Component 2: Computer Applications

Computer Fundamentals, MS Office Tools

Component 3: General Aptitude

Critical reasoning and verbal deduction, Numerical computation, numerical estimation, numerical reasoning and data interpretation.

Component 4: Research Methodology:

Problems and research questions; research and statistical hypotheses; approach and designing research projects; rapid assessment techniques and questionnaire survey. Random and systematic sampling design; experimental design and hypothesis testing. Stratified sampling design; Use of Remote Sensing and GIS Technology.

Recognition of data types: continuous, rank and nominal data. Exploratory analysis; Central tendency, Statistical variance and Population variance; Sub-sampling techniques; Boot-strap and Jack-knife estimator; Probability distributions: normal, binomial, Poisson, t-distributions and Chi-square distributions. Concept of derivatives and slope of a function; Permutations and combinations; Basic probability (probability of random events; sequences of events, etc); Frequency distributions and their descriptive statistics (mean, variance, coefficient of variation, correlation, etc). Statistical hypothesis testing: Concept of p-value; Type I and Type II error, test

statistics like t-test and Chi-square test; Basics of linear regression and ANOVA. Bayesian concept and analysis. Correlation and regression analysis; Test of homogeneity and analysis of variance.

Component 5: Subject Knowledge (Wildlife Science)

i. **Vegetation Science:** Relationship between environmental factors and vegetation types; structural and physiognomic classification of vegetation; Forest Types of India: Champion & Seth's classification; theories and stages of plant succession. Alien invasive plants; aquatic vegetation and its classification; Vegetation quantification and mapping; Biomass estimation. Plant-animal interaction, Economic Botany, Major plant products and Non-timber forest products in India. Plant adaptations to different climatic conditions.

ii. **Basic Zoology :** Major classes of vertebrates and invertebrates: Characteristic features and examples; Economic importance of invertebrates, their adaptation and role as indicators for biodiversity monitoring; Origin and radiation in Birds and Mammals. Zoo-geography, distribution of fish, amphibians, reptiles, birds and mammals; biology of rare, threatened and endangered mammals, birds, reptiles, amphibians and fish species of India. Bird migration.

iii. **Ecology:** Population ecology; meta-population dynamics; growth rates; density independent growth; density dependent growth; niche concept; Species interactions: Plant-animal interactions; mutualism, commensalism, competition and predation; trophic interactions; functional ecology; eco-physiology; behavioural ecology.

iv. **Community Ecology:** Community assembly, organization and evolution; biodiversity: species richness, evenness and diversity indices; endemism; species-area relationships; Ecosystem structure, function and services; nutrient cycles; biomes; habitat ecology; primary and secondary productivity; invasive species; global and climate change; applied ecology.

v. **Evolution:** Origin, evolution and diversification of life; natural selection; levels of selection. Types of selection (stabilizing, directional etc.); sexual selection; genetic drift; gene flow; adaptation; convergence; species concepts; Life history strategies; adaptive radiation; biogeography and evolutionary ecology; Origin of genetic variation; Mendelian genetics; polygenic traits, linkage and recombination; epistasis, gene-environment interaction; heritability; population genetics; Molecular evolution; molecular clocks; systems of classification: cladistics and phenetics; molecular systematics; gene expression and evolution.

vi. **Behavioral Ecology:** Classical ethology; neuroethology; evolutionary ethology; chemical, acoustic and visual signaling; Mating systems; sexual dimorphism; mate choice; parenting behaviour Competition; aggression; foraging behaviour; predator–prey interactions; Sociobiology: kin selection, altruism, costs and benefits of group-living.

vii. **Conservation Laws, Policies and Management:**National Parks, Wildlife Sanctuaries, Conservation Reserves, Community Reserves, Biosphere Reserves in India: National Wildlife Conservation Policy and Action Plans. Forest (Conservation) Act; Wildlife (Protection) Act; Environment (Protection) Act; Traditional Forest Dwellers (Recognition of Forest Rights) Act; National Conservation Authorities (National Biodiversity Authority and National Tiger Conservation Authority), and International Conventions viz., RAMSAR Convention, Convention on Biological Diversity, Convention on Migratory Species. Eco-sensitive Zones, Wetlands of National Importance, Project Elephant, Project Snow Leopard, Important Bird Areas, Coastal and Marine Biodiversity, Forestry and Forest Management in India.

viii. **Human Dimensions of Wildlife Conservation, Conservation Strategies/ Approaches:** Community Participation, Traditional Resource Dependence, Socio-economic Situation, Sustainable Livelihood, Vulnerability, Community Forests, Protected Area-People Interface, Micro-planning, Eco-development and Eco-development Committees, Biodiversity Management Committees, Participatory Rural Appraisal, Livestock-Wildlife Interaction, Human-Wildlife Conflicts and Mitigation.
