



## 4. RECRUITMENT:

(1). **Method of Recruitment:** The method of recruitment to the post of Forest Rangers shall be as follows:—

- (a) **By selection** (direct recruitment) to Fifty percent (50%) of the total sanctioned posts on the results of a competitive examination through the Public Service Commission, West Bengal; and
- (b) **by promotion to** Fifty percent (50%) of the total sanctioned posts from amongst the confirmed Deputy Rangers/Foresters who have been trained in accordance with the provisions contained in Training Rules for the time being in force, and having at least eight years of continuous service in the post.

(2) **Qualifications for direct recruitment:**

- (a) The Candidate shall be a Citizen of India as defined in Part-II of the Constitution of India:
- (b) The Candidate shall hold a Bachelor degree in Science or Engineering of any recognized Indian University or Institute with at least one of the following subject—Agriculture, Botany, Chemistry, Computer Science, Computer Application, Engineering (Agricultural, Chemical, Civil, Computer, Electrical, Electronics, Mechanical), Environmental Science, Forestry, Geology, Horticulture, Mathematics, Physics, Statistics, Veterinary Science, Zoology.

5. **Age for direct recruitment:** The candidate shall not be below 21 years and shall not be more than 32 years on the 1st day of January of the year of advertisement. The upper age limit is relaxable for the candidates belonging to the categories of Scheduled Castes, Scheduled Tribes and other Backward Classes as per the Government order or rules or notifications issued from time to time in this behalf.

6. **Physical Standard for direct recruitment:** A candidate must have the following Minimum Standard of Physical Fitness.

(i) **Minimum Height and Chest Girth:**

	Height (cm)	Chest Girth (cm)	
		Normal	Expansion
Male Candidate	163	84	05
Female Candidate	150	79	05

**Note :** The following minimum standard of height may be allowed to the candidate belonging to the categories of Scheduled Tribes and races as Nepali, Garhwali, Gorkha.

	Height (cm)
Male Candidate	152
Female Candidate	145

(ii) Male candidate will be required to pass a physical fitness test covering a distance of 25 kilometers, in four hours on foot and the female candidate will be required to cover a distance of 14 kilometers within four hours on foot.

(iii) **Health Certificate:**

In case of direct recruitment the candidate shall have to undergo medical examination to be conducted by a Medical Board. The Medical Board shall issue a health certificate and also certify that the candidate is fit to undertaking strenuous outdoor activity of the Forest Department.

7. West Bengal Subordinate Forest Service Recruitment Examination will be held in two successive stages —

(a) **Preliminary Examination** (objective type) — for selection of candidate for the main Examination;

- (b) **Main Examination**— the Main Examination will be held in two successive sub-stages, viz. (a) Written Examination (conventional type) and (b) Personality Test. A selected number of candidates in order of merit on the results of the written examination will be called to the Personality Test.

**A. Scheme and Syllabus for the Preliminary Examination:**

The Preliminary Examination will consist of only one paper on "General Studies and Arithmetic". The question paper will be of an objective type consisting of 200 multiple choice questions. The paper will carry 200 marks and will be of 2½ hour duration. The standard of the paper will be of the level of knowledge as expected of a graduate of a recognized Indian University or Institute. The paper will include questions covering the following field of knowledge:

(i)	English composition	20 marks
(ii)	General Science	25 marks
(iii)	Current Events of National and International Importance	25 marks
(iv)	History of India	25 marks
(v)	World of Geography	25 marks
(vi)	Indian Polity and Economy	20 marks
(vii)	Indian National Movement	20 marks
(viii)	General Mental Ability	20 marks
(ix)	Arithmetic	20 marks

**Note I:** The Preliminary examination is meant to serve as a Screening Test only for the purpose of selection of candidates for the Main Examination. The marks obtained in this examination by the candidates will not be considered for final selection. Only those candidates who will be declared qualified at the Preliminary Examination in a year will be eligible for admission to the West Bengal Subordinate Forest Service (Main) Examination of that year.

**Note II:** The commission shall have the discretion to fix the qualifying marks in the examination.

**B. Scheme of Main Examination:**

**Written Examination:**

The written examination shall be held in two groups:

- (a) Compulsory Subjects and
- (b) Optional Subjects

**(a) Compulsory Subject:**

There shall be three compulsory subjects as stated below:

- (i) English (Essay, Precis writing and Composition);
- (ii) Bengali or Hindi or Urdu or Nepali or Santhali (Essay, Precis writing and Composition);
- (iii) General Studies;

**(b) Optional Subjects :**

Candidates for the aforesaid examination shall take up any one subject from the following list of subjects:—

- (i) Agriculture; (ii) Botany; (iii) Chemistry; (iv) Computer Application / Computer Science;
- (v) Engineering (Agricultural, Chemical, Civil, Computer, Electrical, Electronics, Mechanical);
- (vi) Forestry; (vii) Geology; (viii) Horticulture; (ix) Mathematics; (x) Physics; (xi) Statistics;
- (xii) Veterinary Science; (xiii) Zoology and (xiv) Environmental Science.

(C) Syllabi for the examination in above subjects will be as follows:

**Agriculture:**

Agriculture Botany (Plant Cytology, Genetics, Breeding and Physiology, Morphology of Crop Plants), Agriculture Entomology and Plant Pathology, Agriculture Chemistry, Soil Science.

**Botany:**

Physiology, Plant Geography and Dispersal of Plants, Morphology, Anatomy, Embryology and Taxonomy of Angiosperms, Plant Pathology, Evolution, Cytology, Genetics and Plant Breeding, Economics Botany, Origin and importance of cultivated plants;

**Chemistry:**

Physical and organic (including photo chemistry), Inorganic and Industrial.

**Computer Science / Computer Application:**

Digital computer fundamental, discrete mathematics, Numerical method, Resource Management Numerical method, Resource Management Techniques, Operating System, Data and File Structure, C programming object oriented programming, relation data base management system, MC and Assembly language programming, system software, design and analysis of algorithms, computer system architecture. PC maintenance and trouble shooting, software engineering computer networks, computer graphics, visual programming, Internet and Java Programming.

**Agriculture Engineering:**

Soil and Water Conservation, Investigation and Planning in river Valley Projects, irrigation and Drainage, Building materials, Farm Power and Machinery, Electricity and Rural Electrification, Power Generation and Transmission;

**Chemical Engineering:**

Transport phenomena (under steady state condition), Thermodynamics, Reaction engineering, Transportation, Materials, Instrumentation and process control.

**Civil Engineering:**

Building material and properties and strength of materials, Structural Engineering, Building construction, water supply and sanitary engineering, Road and Bridges.

**Computer Engineering:**

Number system, Data representation, Programming, Elements of a high level programming language PASCAL/C, use of data structure, Fundamentals of computer architecture, Processor design, control unit design, Memory organization, System organization, Microprocessors, Architecture and instruction set of Microprocessors, Assembly language programming, microprocessors based system design, Personal Computer and their typical use.

**Electronics Engineering:**

Physical Electronics, Electronics circuits, Operational Amplifiers and Analog Computers, Control system, Digital Electronics, Instrumentation and Measurement, Principals of Communication, Electromagnetic Fields and Antennas, Microprocessor Fundamentals.

**Electrical Engineering :**

Network Statics, Magnetics, Measurement, Electronics, Electrical Machines Control System, Industrial Electronics, Electrical Machines (Heavy Current), Synchronous Machines Special Machines, Power System and Protection, Utilisations, Economic and other aspects of different systems or rail, traction, communication system (light current), Microwaves, D.C. Amplifiers.

### Mechanical Engineering :

Strength of materials, Applied thermodynamics, Theory of machine and machine designs Production Engineering Fluid mechanics and water power.

### Forestry :

Silviculture-General, Silviculture-System, Silviculture of trees, Agroforestry, Social Forestry, Joint Forest Mangement and Tribology, Forest Soil, Soil Conservation and Watershed Management, Enviroment Conservation and Biodiversity (including pollution), Tree Improvement and few technology, Forest Management and Management Systems, Forest Working Plan, Forest Mensuration and Remote Sensing, Survey and Forest Engineering, Forest Ecology, Ethno Botany, Forest Resources Utilisation, Forest Protection and Wildlife Biology, Forest Economics and Legislation.

### Geology :

General Geology, Structural Geology and Geotectonic, Stratigraphy, Palaeontology, Crystallography and Mineralogy, Petrology Economic Geology.

### Horticulture :

Principals of fruit and vegetable production, Principles of Horticulture, Post harvest technology of Horticulture crop, plant propagation and Nursery Management, Regulation of growth and bearing in fruit crop, Production technology of tropical, sub-tropical and temperate fruit crop, Production technology of vegetable, tuber, plantation, spice, ornamentals, medicinal, aromatic and indoor plants. Breeding of vegetable crops, Gardens design, Nursery layout and management, Elementary Statistics, Experimental design and computer application.

### Mathematics :

Algebra, Analytical Geometry of two and three Dimensions, Vector Algebra and Vector Calculus, Differential Calculus, Integral Calculus, Differential Equation, Linear Programming, Probability and Statistics, Statics and Dynamics, Hydrostatics.

### Physics :

Mechanics of a single particle, Mechanics of system of particles, Properties of deformable bodies, Properties of liquids and gases, Waves and Oscillation, Electroacoustics ultrasonics, Heat transmission by Conduction, Convection and Radiation, First and Second Laws of Thermodynamics, Entropy, Classical Statistics, Bose-Einstein and Fermi-Dirac Statistics, Electrotatic and Magnetostatic Fields. Direct current circuits, Electromagnetic induction, Alternative current circuits, optical phenomena of Interference, diffraction and polarization, Fundamentals of Atomic and Nuclear Physics, X-Ray and Radioactivity, Semi-Conductor physics, Electronics, Principles of Radio and Television.

### Statistics :

Probability, Descriptive Statistics, Numerical, Mathematical Analysis, Theoretical Statistics, Elementary Theory of Estimation, Elementary Theory of Testing Hypothesis, Economic Statistics, Vital Statistics, Application of Statistics of Agriculture, Quality Control, Sample Survey, Official Statistics.

### Veterinary Science :

Gross anatomy I, II and III, Veterinary Physiology I, II, III and IV, General Veterinary Biochemistry, Biostatistics and Computer application, General Livestock Management, Fodder production and grassland management, Sociology and principles of veterinary and A.H. Extension Physiological Chemistry, Introduction to Molecular Biology and Biotechnology, Principles of Genetics and Population Genetics, Animal Housing Sanitation, Livestock Economics, Marketing and Business Management, Histology and Embryology, Principles of Animal Nutrition and Breeding (includes avian), evaluation of feed staff and feed technology, General veterinary parasitology, microbiology and pathology, Applied anatomy, Applied

nutrition I and II, Veterinary helminthology, Bacteriology, Protozoology, Epidemiology and Mycology, Immunology and Serology, Systemic pathology, Livestock breeding system, General and CNS pharmacology, entomology and arachnology, special pathology I and II, milk and hygiene and public health, swine or equine or camel or yak production and management, wild and zoo animal healthcare and management, fish production, Lab animal or rabbit or fur animal care and management and pet animal care, Autonomic and systemic pharmacology, veterinary and systemic virology, special pathology I, II, Cattle or Buffalo or sheep or goat and avian production and management, Milk and Meat and their product technology, abattoir practice and animal by-product technology, clinical bio-chemistry, chemotherapy, zoonosis and human health, environmental hygiene, general surgery and anaesthesia, extension techniques, toxicology, gynaecology and obstetrics, regional and clinical surgery, clinical and preventive veterinary medicines, andrology and artificial insemination, lab diagnosis and ambulatory clinics.

**Zoology :**

Invertebrata, Outline knowledge of Social insects and elementary knowledge of sericulture, Chordata-Pisces, Amphibia, Reptilia, Aves and Mammalia, elementary knowledge of Fisheries, Cytogenetics, Embryology and Histology, Laws Heredity. Linkage and Crossing over, Sex-Linked inheritance and sex determination and mutation, Evolution, Adaptation, Ecology, Fertilization, Parthenogenesis, Cleavage and Formation of three germinal layers in rabbit, Development Eye, heart, brain and kidney in chick.

**Environmental Science :**

Fundamentals of Environment, Nature and Natural process, Ecosystem, Population and Environment, Land and water use of Earth, Air Pollution, Energy sources, Environment and Public Health, Waste Management, Environmental policies.

The Standard of Syllabus of these subjects shall be that of Bachelor's degree in Science or Engineering of a recognized Indian University or Institute.

*Note :* Each of the compulsory subject will carry 100 marks and the examination will be of 3 hours duration. The optional subject will have two papers carrying 100 marks each and examination will be of 3 hours duration for each paper.

**D. Personality Test:**

There shall be Personality Test Carrying 100 marks.

A number of candidates to be selected in order of merit on the results of the Main Examination (Written) for the service will have to appear for the Personality Test.

Each candidate will be asked questions on matters of general interest. The purpose of the test will be to assess the personal qualities of the candidate, e.g. alertness of mind, power of clear and logical exposition, intellectual and moral integrity, leadership and also the range of interest of the candidate.

The Commission shall have the discretion to fix qualifying marks in any paper or all papers and in the aggregate.

If a candidate fails to secure qualifying marks in any paper/subject, the marks in that paper/subject will not be considered in calculating his/her aggregate.

**8. Examination of Direct Recruitment:**

The competitive examination referred to in Rule 4 shall be held at such interval as the state government may, in consultation with the commission from time to time determine / decide.

9. Combined Examination:

- (1) There will be a combined examination comprising two separate and distinct examinations, for the recruitment to West Bengal Forest Service and to West Bengal Subordinate Forest Service, by the State Public Service Commission for the posts and services as detailed below :
  - (A) Assistant Divisional Forest Officer, under West Bengal Forest Service, and
  - (B) Forest Range Officer, under West Bengal Subordinate Forest Service.
- (2) A candidate may compete for one or both of the posts, but is required to submit one application only indicating the choice of Service as mentioned above.
- (3) The candidate is required to state clearly in the application their choice of the service and choice for the optional subject. No further application for changes to the choice, once submitted is permitted.
- (4) Selection to the two posts mentioned above will be done separately.

10. Procedure of recruitment by promotion:

The recruitment to vacancies by promotion shall be made from amongst the confirmed and trained Deputy Rangers/Foresters adjudged suitable by the Departmental Promotion Committee constituted by the State Government.

11. In-service Training :

- (1) The candidates appointed on the basis of the results of the main examination, personality test and medical and physical fitness shall be sent for compulsory in service training to any of the state Forest Service College or Institutes of Govt. of India, as assigned by the Director of Forest Education, Ministry of Environment & Forests, Govt. of India.

(2) Special Condition :

Selected candidates shall, before being deputed for training, execute a bond undertaking to serve the Government of West Bengal for a period of five years. In the event of non-fulfillment of such condition, the candidate shall be required to refund to the State Government all costs incurred by the State Government in connection with the training including salaries.

12. Deduction of Marks

- (1) A deduction of 10 percent of full marks may be made from the total marks secured by a candidate in a particular paper if he/she discloses his/her identity by writing his/her name Roll No. or by putting any identifying marks in the answer script of that paper.
  - (2) There shall be negative marking for each wrong answer to multiple choice questions (MCQ) type.
13. Answers in all the paper, compulsory and optional, except the language papers may be written either in English or in Bengali (unless otherwise directed in these rules or in the question papers).

Note : Candidates shall write their answers to all the questions in only one and the same language in any particular paper.

By order of the Governor,

CHANDAN SINHA,  
*Principal Secretary to the Government of West Bengal.*