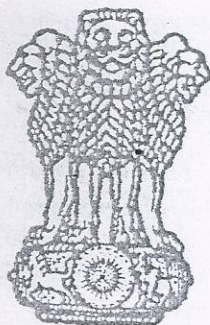


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PART I—Orders and Notifications by the Governor of West Bengal, the High Court, Government Treasury, etc.

## GOVERNMENT OF WEST BENGAL

Department of Forests

Aranya Bhavan, Block LA-10A, Sector-III, Salt Lake City, Kolkata-700 098.

### NOTIFICATION

No. 78—For dated 13<sup>th</sup> January, 2015: In exercise of the power conferred by the proviso to article 309 of the Constitution of India the Governor is pleased hereby to make the following rules, in supersession of all previous rules on the subject, regulating recruitment to the post of Forest Rangers under the Directorate of Forests, Government of West Bengal:—

#### Rules

1. **Short title, extent and commencement:** (1) These rules may be called the **West Bengal Services (Recruitment of Forest Rangers) Rules, 2014**.  
 (2) They shall extend to the whole of the State of West Bengal.  
 (3) They shall come into force on the date of their publication in the official gazette.
2. **Name of the post:** Forest Rangers in the West Bengal Subordinate Forest Service under Directorate of Forests, Government of West Bengal
3. **Definitions:**  
 In these rules, unless the context otherwise requires:
  - (i) "Government" means Government of West Bengal;
  - (ii) "Examination" means competitive examination conducted for the purpose of recruitment to the post of Forest Ranger;
  - (iii) "Directorate" means Directorate of forests, Government of West Bengal;
  - (iv) "Commission" means Public Service Commission, West Bengal;
  - (v) "Commission authority" means the officer designated and authorized by the Principal Chief Conservator of Forests for the purpose of implementation of provisions under these rules;

## 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.*

**Proposed Rules for recruitment to the posts of Forest Ranger in West Bengal subordinate Forest Service (under the Directorate of Forest) Govt. of West Bengal.**

The method of and the qualification required for, recruitment to the posts of Forest Ranger in the West Bengal subordinate Forest Service (under the Directorate of Forest) Govt. of West Bengal, shall be as detailed below:

1. **Name of the post :**

Forest Rangers in the West Bengal Subordinate Forest Service

2. **Method of Recruitment :**

- (a) By selection (direct recruitment) to 2/3<sup>rd</sup> of the total sanctioned posts on the results of a competitive examination through the Public Service Commission, West Bengal. Departmental candidates (Deputy Rangers/Foresters) being eligible to apply if they possess the qualification for direct recruitment;
- (b) By promotion to 1/3<sup>rd</sup> (thirty three percent) of the total sanctioned posts from amongst the confirmed Deputy Rangers/Foresters having at least eight years continuous service in the post.

3. **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 (Agriculture, Chemical, Civil, Computer, Electrical, Electronics, Mechanical), Environmental Science, Forestry, Geology, Horticulture, Mathematics, Physics, Statistics, Veterinary Science, Zoology.
- (c) Age : The candidate shall not be below 21 years and shall not be more than 27 years on the 1<sup>st</sup> day of January of the year of advertisement. The upper age limit is relaxable for the candidates belonging to the categories of Schedule Caste, Schedule Tribe and other Backward Classes as per the Government order or rules or notifications issued from time to time in this behalf.

**Note :** For the Departmental candidate eligible to apply relaxation of age may be granted to them as per the Government Order.

- (d) **Physical Standard :** A candidate must have the following Minimum Standard of Physical Fitness.

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

	Height (cm)	Chest Girth (cm)	
		<i>Normal</i>	<i>Expansion</i>
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 Schedule Tribe and races as Nepali, Garwali, Gorkha.

	Height (cm)
Male Candidate	152



(ii) Male candidate will be required to pass a physical fitness test covering a distance of 25 kilometres, in four hours on foot and the female candidate will be required to cover a distance of 14 kilometres 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 health certificate and also certify that the candidate is fit for undertaking strenuous outdoor activity of the Forest Department.

4. The 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

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.

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 Subject

(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 (Essay, Précis writing and Composition);
- (iii) General Studies

(b) **Optional Subjects:**

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

(i) Agriculture; (ii) Botany; (iii) Chemistry; (iv) Computer Application, Computer Science; (v) Engineering (Agriculture, 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) **Syllabus for the examination in above subjects shall 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 Geology 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 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, Principles 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-Mangrove and cold desert, Silviculture of trees, Agroforestry, Social Forestry, Joint Forest Management and Tribology, Forest Soil, Soil Conservation and Watershed Management, Environment 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, Electrostatic 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-1 :* 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 a 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.

5. In-service Training :

(a) Candidates provisionally selected through direct recruitment shall be sent to Forest Rangers' college at any place in India for in-service training except candidates securing 1<sup>st</sup> position for Deputy Ranger/Forester at the final examination of State FTC followed by practical training in the State.

(b) Nomination for in-service Training :

Name of the candidates selected for admission together with attested copies of all certificates prescribed hereunder shall be submitted to the Director, Forest Education Government of India by the Forest Department of the State Government.

(c) Certificates :

The following certificates or Mark sheet as the case may be in original must be submitted by the candidate for verification to the Principal at the time of admission :

(i) Proof of age;

(ii) Bachelor's Degree;

- (iii) Certificate of physical test issued by the Competent Authority;
  - (iv) Certificate of health issued by Medical Board;
  - (v) Appointment and Nomination letter issued by the sponsoring authority.
- (d) The cost on account of tuition fees, travelling expenses and equipment allowances sanctioned by the Government of India from time to time as per rules for the Forest Rangers course in connection with the training, shall be borne by the State Government.
6. Special Condition :
- (a) 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-fulfilment of such condition, be required to refund to the State Government all costs incurred by the State Government in connection with the training including salaries.
  - (b) All selected candidates shall undergo compulsory training which will be conducted for the service as applicable prior to confirmation in the service.
  - (b) Procedure of recruitment by promotion:  
The recruitment to vacancies by promotion shall be made from amongst the persons adjudged suitable by the Departmental Promotion Committee constituted by the State Government.
7. There will be a combined examination for the recruitment for the posts of West Bengal Forest Service and for the posts of Forest Ranger to be conducted by the West Bengal Public Service Commission.

By order of the Governor

## **Proposed Rules for recruitment to the posts of West Bengal Forest Service in West Bengal**

In exercise of the power conferred by the proviso to article 309 of the Constitution of India and in supersession of all previous rules in the subject, the Governor is pleased hereby to make the following rules regulating recruitment to the post of Assistant Divisional Forest Officer in the West Bengal Forest Service under Forest Department, Government of West Bengal.

### **RULES**

1. **Short title & commencement:**
  - (a) These rules may be called the West Bengal Forest Service (Recruitment and Training) Rules, 2013.
  - (b) They shall come into force on the date of this publication in the Official Gazette.
2. **Definition—** In these rules:
  - (a) “Commission” means the Public Service Commission, West Bengal.;
  - (b) “Service” means The West Bengal Forest Service, constituted with effect from 31.07.1982 in terms of Forest Department’s Notification No. 4168-For/13F-6/82 dt. 31.07.1982;
  - (c) “Principal” means The Principal of the State Forest Service College / Institute under Government of India;
  - (d) “Sponsoring Authority” means the State Government.
3. **Constitution of Service:**

The service shall consist of the persons recruited to the service in accordance with the provision of rule 4 to these rules.
4. **Method of recruitment:**
  - (1) By selection (direct recruitment) to 2/3<sup>rd</sup> of the total posts on the results of competitive examination to be conducted by the Commission;
  - (2) By promotion to 1/3<sup>rd</sup> (thirty three percent) of the total posts from amongst the permanent Forest Rangers in consultation with the Commission.
5. **Qualification for direct recruitment:**
  - (1) Candidates shall be a citizen of India as defined in Part-II of the Constitution of India;
  - (2) Candidates must possess Bachelor degree or its equivalent in Science or Engineering of any recognized University or Institute with at least one of the following subjects— Agriculture, Botany, Chemistry, Computer Science, Computer Application, Engineering (Agriculture, Chemical, Civil, Computer, Electrical, Electronics, Mechanical), Environmental Science, Forestry, Geology, Horticulture, Mathematics, Physics, Statistics, Veterinary Science, Zoology.
6. **Age:**

The Candidates shall not be below 21 years and shall not be more than 27 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 Casts, Scheduled Tribes and the Backward Class, as per the Government order or rules or notifications issued from time to time in this behalf.

7. **Measurement:**

Minimum standard of height and chest girth for a candidate shall be as under:

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

Note: The following minimum height may be allowed to candidates belonging to the categories of Schedule Tribes community and Races such as Nepali, Garwali, Gorkha.

Male Candidate	152
Female Candidate	145

8. **Walking Test :**

Male candidate will be required to pass a physical fitness test covering a distance of 25 kilometers, within four hours on foot and the female candidates will be required to cover a distance of 16 kilometers, within four hours on foot.

9. **Health Certificate:**

Candidates required under sub-rule(1) of rule 4 of these rules shall have to undergo medical examination to be conducted by a Medical Board. The Medical Board shall issue a health certificate and shall also certify that such candidates are fit to undertake strenuous outdoor work in the Forest Department.

10. **Qualification of promotion:**

The selection to service by promotion referred to in sub-rule (2) of rule 4 of these rules shall be made in consultation with the Commission from amongst the permanent Forest Rangers, who on the 1<sup>st</sup> day of January of the year in which the selection is made, have passed the departmental examination in (i) Forest Law, (ii) Accounts Paper-I and (iii) Accounts Paper-II, having completed at least 8 years continuous service in the rank of Forest Rangers.

11. **In-Service Training:**

- (1) The candidates selected for appointment on the basis of the Main Examination (Written) and Personality Test shall be sent for compulsory in-service training at any of the State Forest Service Colleges or Institutes of the Government of India from time to time.
- (2) Nomination for training: Name of the candidates selected for admission together with attested copies of all certificates prescribed hereunder should be submitted to the Director, Forest Education, Government of India by the Forest Department, Government of West Bengal;
- (3) Certificate: The following certificates or Mark sheets, as the case may be, in original must be submitted by the candidate for verification to the Principal at the time of admission for training;
  - (i) Proof of age;
  - (ii) Bachelor's degree
  - (iii) A certificate of physical test issued by Competent Authority



- (iv) Certificate of health issued by Medical Board;
- (v) Appointment and Nomination letter issued by the Sponsoring Authority

**12. Scheme of the Examination for direct recruitment:**

The West Bengal Forest Service Recruitment Examination will be held in two successive stages :

- (a) Preliminary Examination (objective type)— For the selection of candidates 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 recognised Indian University or Institute. The paper will include questions covering the following fields 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 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

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 Forest Service (Main) Examination of that year.

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, Précis writing and Composition);
- (ii) Bengali or Hindi or Urdu or Nepali (Essay, Précis writing and Composition);
- (iii) General Studies

(b) **Optional Subjects :**

Candidates for the aforesaid examination shall take up any two subjects from the following list of subjects :

(i) Agriculture; (ii) Botany; (iii) Chemistry; (iv) Computer Application, Computer Science; (v) Engineering (Agriculture, 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 broadly 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 Geology and Dispersal of Plants, Morphology, Anatomy, Embryology and Taxonomy of Angiosperms, Plant Pathology, Evolution, Cytology, Genetics and Plant Breeding, Economic Botany, Origin and importance of cultivated plants;

Chemistry :

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

Computer Science / Computer Application :

Digital computer fundamental, Discrete mathematics, Numerical method, Resource Management Techniques, Operating System, Data and File Structures. C programming object oriented programming, relation data base management system, MC and Assembly language programming, System software, Design and analysis of algorithm, Computer system architecture, PC maintenance and trouble shooting, Software engineering computer networks, Computer graphics, Visual programming, Internet and Java Programming.

Agricultural 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 Computers and their typical use;

Mechanical Engineering :

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

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.

Electronic 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;

Forestry:

Silviculture-General, Silviculture-System, Silviculture-Mangrove and cold desert, Silviculture of trees, Agro-forestry, Social Forestry, Joint Forest Management and Tribology Forest Soil, Soil Conservation and Water shed Management, Environment 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 Utilization, Forest Protection and Wildlife Biology, Forest Economics and Legislation.

Geology:

General Geology, Structural Geology and Geotectonic, Stratigraphy, Paleontology, 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, Garden 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, Electro-acoustics Ultrasonic, Heat transmission by conduction, Convection and Radiation, First and Second Laws of Thermodynamics, Entropy, Classical statistics Bose-Einstein and Fermi-Dirac Statistics, Electrostatics and Magneto-static Field, 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 aracology, 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 health care 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 medicine, 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 recognized Indian University or Institute).

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

*Note-II :* No candidate shall be allowed to take more than one subject from the following groups :

- (i) Agriculture, Agricultural Engineering and Veterinary Science.
- (ii) Chemistry and Chemical Engineering.
- (iii) Computer Application, Computer Science and Computer Engineering.

- (iv) Electrical Engineering and Electronics Engineering; and
- (v) Mathematics and Statistics

**C. Personality Test:** There shall be a Personality Test Carrying 200 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 question 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.

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

13. Examination for Direct Recruit: The Competitive Examination referred to in the Rule 4(i) shall be held at such interval as the State Government may in consultation with the Commission from time to time determine.

By Order of the Governor