

**Suggested in Guideline  
by  
Ministry of Environment, Forests &  
Climate Change**

## Course Contents for Induction Training for Forest Guards/ Foresters

Distribution of Subjects for six months (24 weeks) Course

Timing: 1) 3<sup>rd</sup> week of April- end 2<sup>nd</sup> week October, 2) 3<sup>rd</sup> week October –end 2<sup>nd</sup> week March

Calculation of Effective Working Days

|    |  |   |
|----|--|---|
| 1  | Duration of the course (24 weeks)                          | 7days/week x 24 weeks=168 days- (1)               |
| 2  | Sundays excluding tour days                                | 18 days- (2) (six Sundays on tour)                |
| 3  | Gazetted Holidays  | 10 days- (3)                                      |
| 4  | Registration and orientation                               | 1 day- (4)  |
| 5  | Examination  | 10 days- (5)                                      |
| 6  | Preparation of results/Sport function & Hobby Competitions | 4 days- (6)                                       |
| 7  | Passing out parade and convocation                         | 1day- (7)   |
| 8  | Relief   | 1day-(8)  |
| 9  | Self - Studies & Library Works                             | 10 days (9)                                       |
| 10 | Effective working days                                     | (1)-<br>{(2)+(3)+(4)+(5)+(6)+(7)+(8)+(9)}=113days |
| 11 | Classroom sessions   | 62 days   |
| 12 | Excursions (Saturdays)                                     | 18 days   |
| 13 | Tour Days  | 33 days   |

- Allocation of time for one classroom session: 60minutes

### 1. Daily Schedule

| Time                                     | Activities                               |
|--|--|
| 6-7 AM (summer)<br>6:30-7:30 AM (winter) | Physical Training/ Yoga _Pranyam         |
| 9 AM- 1PM                                | Classes (with 15min,tea break)           |
| 1-2PM                                    | Lunch Break                              |
| 2-4PM                                    | Classes                                  |
| 5-6:30PM (summer)<br>5-6 PM (winter)     | Games/Self Defence (Judo-Karate)<br>Yoga |

## Subject-wise Allotment of Hours

|   | Subjects                                      | Classroom session<br>(Theory + Practical) <sup>1</sup> | Excursions     | Tour<br>& Field<br>Exercises |
|---|---|--|----------------|------------------------------|
| <b>General Management &amp; Office Procedure</b>                  |   |  |                |                              |
| 1   | Managerial Skill                              | 27   |                |                              |
| 2   | Office procedure and accounts                 | 24   | 1              |                              |
| <b>Basics of Forestry and FD duties</b>                           |   |  |                |                              |
| 3   | General Silviculture                          | 20   | 1              | 3                            |
| 4   | Silviculture of trees & Silvicultural systems | 15   | 1              | 4                            |
| 5   | Regeneration methods                          | 15   | 2              | 4                            |
| 6   | Forest management                             | 5  |                | 3                            |
| 7   | Forest botany                                 | 20   | 1              |                              |
| 8   | Soil and water conservation                   | 10   | 1              | 2                            |
| 9   | Soil science                                  | 5  | 1              |                              |
| 10  | Forest survey                                 | 26   |                | 1                            |
| 11  | Forest mensuration                            | 5  | 1              |                              |
| 12  | Forest engineering                            | 5  | 1              |                              |
| 13  | Forest utilization                            | 7  | 1              | 2                            |
| 14  | Forest law                                    | 10   | 1              | 2                            |
| 15  | Forest protection                             | 10   | 1              | 4                            |
| 16  | Wildlife management                           | 13   | 1              | 4                            |
| <b>JFM &amp; people participatory activities related Subjects</b> |   |  |                |                              |
| 17  | Concept of JFM                                | 21   | -              | 4                            |
| 18  | JFM Stakeholders                              | 6  | -              |                              |
| 19  | CBO <sup>2</sup> Building                     | 5  | -              |                              |
| 20  | PRA   | 24   | 2              |                              |
| 21  | Micro Plan                                    | 18   | 2              |                              |
| 22  | Participatory Skills for field staff          | 26   | -              |                              |
| <b>Skills Common to All Subjects</b>                              |   |  |                |                              |
| 23  | Computer Application                          | 24   | -              | -                            |
| 24  | First Aid                                     | 7  | -              |                              |
| 25  | Seminars                                      | 24   | -              | -                            |
|   | <b>Total</b>                                  | <b>372 hours=62 days</b>                               | <b>18 days</b> | <b>33 days</b>               |

\*The course can be shortened up to three months by adjusting the time allocated to excursions and tour days besides specific days allotted for Self Studies & library works, sports etc. as the sample is given in Annexure I.

<sup>1</sup> Classroom sessions: Including sessions using such places in the premises as arboretum, nursery, demonstration plots, laboratory, computer room, etc.

1 CBO: Community Based Organization (ex: JFMC, SHG, etc.)

## Course Contents

|  |  |         |
|--|--|---------|
| <b>1. Managerial Skill (27 hours) including management games and exercises</b> |  |         |
| 1. Individual behaviour  | - Growth of individual, Individual traits, Attitude, Personality   | 1 hours |
| 2. Organizational behaviour  | Group behaviour  | 2 hours |
| 3. Communication Skill   | Art of Listening, Art of Speaking, Art of Writing  | 4 hours |
| 4. Interpersonal Skill   | -  | 4 hours |
| 5. Team Building   | -  | 2 hours |
| 6. Motivation  |  | 2 hours |
| 7. Leadership  |  | 4 hours |
| 8. Managing Boss   |  | 1 hour  |
| 9. Public dealing  |  | 2 hours |
| 10. Dealing with media   |  | 2 hours |
| 11. Time Management  |  | 1 hour  |
| 12. Stress Management  |  | 2 hour  |
| <b>2. Office procedure and accounts (24 hours), excursion 1 day</b>            |  |         |
| 1  | Definition & Role of Public Servant, duties and obligations, service rules, immunities to PS   | 4 hour  |
|  | Conduct Rules, do's & donot's, Disciplinary rules  |         |
| 2  | Organizational structure of the forest department  | 1 hour  |
|  | Duties and responsibilities of FR/FG as outlined in the state forest code  |         |
| 3.   | Transfer of charge of beats/sections procedure to be followed  | 1 hour  |
| 4.   | Preparation and/or maintenance of muster roll, bills, hand receipt, vouchers   | 4 hour  |
| 5.   | Writing and maintenance of cashbook and measurement book   | 4 hour  |
| 6.   | Conditions of Service (Travel and leave rules, GPF, Medical etc)   | 3 hour  |
| 7  | Necessary Documents to be maintained   | 1 hour  |
| 8.   | Overview of Right to Information Act   | 2 hour  |
|  | Background, Genesis, Salient feature, PIO, Appeal, Record Maintenance etc. through Quiz, Exercises, Case studies   |         |
| 9.   | Labour Laws, Minimum Wages Act/ other Central/ State Acts  | 4 hour  |
| <b>3. General Silviculture (20 hours), Excursions 1day, Tour 3 days</b>        |  |         |
| 1. Introduction  | 1-1. Overview of the forests of the state<br>1-2. Tangible and intangible benefits of the forests<br>1-3. Forests and environment-Forest and hydrological/carbon cycle, global warming, climate change, Eco-system services<br>1-4. Protection, production and conservation forestry, Social Forestry, Agro-forestry | 4 hours |
| 2. Growth of Trees   | 2-1. Various Stages of Growth<br>-Seedling   | 1 hour  |

|   |  |  |
|---|--|--|
|   | <ul style="list-style-type: none"> <li>-Sapling</li> <li>-Pole</li> <li>-Tree</li> <li>-Crown</li> </ul>   |  |
| 3.Factors Governing growth of Forests   | 3-1. Climate<br>3-2. Topography and aspect<br>3-3. Soil<br>3-4. Biotic factors   | 4 hours  |
| 4.Plant Succession  | 4-1. Causes and types    4-6. Effect of Climate Change<br>4-2. Climate climax<br>4-3. Pre-climax<br>4-4. Post-climax<br>4-5. Edaphic climax  | 2 hours  |
| 5.Important Forest Types of the State   | 5-1. Distribution<br>5-2. Floristic composition  | 4 hours  |
| 6.Tree Classification   | 6-1. Dominant<br>6-2. Dominated<br>6-3. Suppressed<br>6-4. Dead or moribund<br>6-5. Diseased<br>6-6. Crown and canopy  | 2 hours  |
| 7.Tending   | 7-1. Definition<br>7-2. Need<br>7-3. Weeding and cleaning<br>7-4. Climber cutting  | 1 hour   |
| 8.Thinning  | 8-1. Mechanical thinning<br>8-2. Ordinary thinning<br>-Light (A grade)<br>-Moderate (B grade)<br>-Heavy (C grade)<br>-Very heavy (D grade)<br>8-3. Crown thinning<br>8-4. Selection thinning   | 2 hours<br><br>(+OJT:<br>Tending and<br>thinning)      |
| Field Study   | During the tour and Saturday excursions, growth factors, plant succession, forest types and stages of growth will be observed.   |  |
| <b>4.Silviculture of Trees &amp; Silviculture Systems (15 hours),Excursions 1 days, tour 4 days</b> |  |  |
| 1.Silviculture of trees   | Study of habitat, distribution, soil and climate requirements and phenology of at least 10 economically important species of the state concerned.<br>A list of species is furnished <sup>3</sup><br>The state is free to add widely occurring/ grown species that does not figure in the list. | 10 hours<br><br>(+OJT:<br>Silviculturue<br>of species) |
| 2.Silvicultural Systems   | 2-1. High forest and coppice systems<br>2-2. High forest systems<br>2-3. clear felling system<br>2-4. Selection system<br>2-5. Shelter wood system<br>2-6. Coppice Systems   | 5 hours  |

|             |   |  |
|-------------|---|--|
|             | 2-7. Simple coppice system<br>2-8. Coppice with standard system<br>2-9. People oriented Silviculture –new development of JFM            |  |
| Field Study | The trainees will be shown the silvicultural systems and silviculture of such species that are met with during the tours and excursions |  |

| <b>5..Regeneration Methods (15 hours), Excursion 2 days, tour 4 days</b> |  |         |
|--|--|---------|
| 1.Natural<br>Regeneration  | 1-1. light demanders and shade bearers<br>1-2 natural regeneration from seed<br>-In clear felled areas- controlled burning.<br>-under shelter wood<br>-in irregular forests<br>1-3. natural regeneration by coppice<br>-seedling coppice<br>-stool coppice<br>1-4. assisting natural regeneration<br>-gap planting in barren patches<br>-weeding, cleaning, climber cutting and soil working<br>-thinning<br>-cultural operations<br>-soil and water conservation measures | 2 hours |
| 2.Artificial<br>regeneration   | Introduction<br>Objectives<br>-choice of species (General criteria, informed choices by local)<br>-pure vs. mixed crops<br>-exotics vs. indigenous species<br>-artificial vs. natural regeneration- merits and demerits<br>-use of seedlings, aerial seeding, vegetative propagation and tissue culture  | 3 hours |

3 See attached list at the end Annexure I.

|                        |  |         |
|------------------------|--|---------|
|                        | <ul style="list-style-type: none"> <li>• Use of seedlings, aerial seeding, vegetative propagation and tissue culture</li> </ul>  |         |
| 3. Nursery             | <ul style="list-style-type: none"> <li>• Seed collection and storage</li> <li>• Site selection and fencing</li> <li>• Preparation of Compost pit, Vermi Compost</li> <li>• Preparation of mixture to be used in beds and poly pots</li> <li>• Preparation of germination and secondary beds-soil preparation.</li> <li>• Filling polypots</li> <li>• Pre-treatment of seeds, sowing of seeds in beds / dibbling seeds in polypots</li> <li>• Watering regime</li> <li>• Pricking out seedlings in polypots, Root trainer</li> <li>• Culling and grading</li> <li>• Shifting, root-pruning and hardening</li> <li>• Plant protection</li> <li>• Maintenance of nursery register</li> <li>• Hi tech Nursery- Poly house, Green (Net) House, Hardening Area, Hedge Garden, Mist Chamber, Fogger, Sprinkler, Temperature &amp; Humidity control</li> </ul> | 4 hours |
| 4. Planting Operations | <ul style="list-style-type: none"> <li>• Site selection</li> <li>• Survey and demarcation, GPS tagging of site, Geo-tagging of site photographs</li> <li>• Aligning according to spacing, staking/markings</li> <li>• Pitting</li> <li>• Transport of seedlings and planting</li> <li>• Manuring</li> <li>• Replacing casualties</li> <li>• Pasture development</li> <li>• Weeding and soil working</li> <li>• Mulching/frost protection</li> <li>• Tending</li> <li>• Thinning</li> <li>• Pollarding</li> </ul>   | 6 hours |
| Field Study            | <p>Entire nursery and planting operations will mainly be trained through fieldwork on two consecutive Saturday excursions including documentation with:</p> <ul style="list-style-type: none"> <li>• Nursery Journal</li> <li>• Plantation Journal</li> </ul>  |         |

| <b>6. Forest Management (5 hours), Tour 3 days</b> |  |        |
|--|--|--------|
| 1. Objectives                                      | <ul style="list-style-type: none"> <li>• Production (economics)</li> <li>• Protection (Conservation)</li> <li>• Bio-aesthetic (Parks &amp; Garden/ Urban Forests)</li> </ul> | 1 hour |
| 2. Form of forests                                 | Concept of normal forest, age gradation, age classes and diameter classes  |        |
| 3 Growth of forests                                | Current and mean annual increments   | 1 hour |
| 4 Types of rotation                                | <ul style="list-style-type: none"> <li>• Physical</li> <li>• Silvicultural</li> <li>• Technical</li> </ul>   | 1 hour |

|  |   |        |
|--|---|--------|
|  | <ul style="list-style-type: none"> <li>Financial maximum volume production</li> <li>-maximum income production</li> </ul> |        |
| <b>6. Forest management (5hours) Tour 3 days</b> |   |        |
|  | -   |        |
| 5. Yield regulation                              | -by area<br>-by volume  | 1 hour |
| 6. Working plan & Microlevel management plan     | -aim<br>-working circles<br>-felling series   | 1 hour |
| Field Study                                      | Observation of an example of Working Plan   |        |

|   |  |  |
|---|--|--|
| <b>7. Forest Botany (20 hours) Excursion 1 days</b> |  |  |
| 1.basics  | 1.1 External morphology (bark, branching pattern, phyllotaxy, leaf form, flower & inflorescence, fruit and seeds)<br>-parts of a plant<br>-roots types and functions<br>-stem – functions<br>-Leaf parts functions<br>-Inflorescence types<br>-Flowers-unisexual and bisexual-parts and functions<br>-fruits simple, aggregate and multiple<br>-seeds dispersal germination<br>1.2 anatomy<br>-cells and tissues<br>-heartwood and sapwood<br>-annual rings<br>1.3 physiology<br>-photosynthesis<br>-transpiration<br>-translocation<br>-respiration<br>1.4 taxonomy<br>-binomial nomenclature<br>-species, genus, family<br>1.5 vegetative propagation<br>1.6 ecology<br>-basic concepts<br>-eco-system<br>-related energy in ecological system, food chain and<br>-food web,<br>-ecological calamities | 15 hours (5 hours practical in laboratory) |
| 2.Economic botany                                   | -local names of 50 timber and NW FP species, their economic importance and uses.<br>-Preparation of herbarium sheet for 10 important species   | 5 hours                                    |
| Field botany  | During JFM fieldwork, the trainees will learn to identify the local species from the villagers and learn their local names and uses.<br>-it is sufficient if the trainee assimilates local and common names of 50 important species. However, the course material should give the botanical names. During on the job training RFO/DFO should test their field knowledge  |  |



| <b>7. Forest Botany (20 hours), Excursion 1 day</b> |   |  |
|---|---|--|
|   | Teach the local and the botanical names of the important species <ul style="list-style-type: none"> <li>• Identification of plants from morphology will be continued during Saturday excursions and tours/with villagers during collaborative walk during PRA exercise</li> </ul> |  |

| <b>8. Soil and Water Conservation (10 hours), Excursion 1 day, Tour 2 days</b> |   |         |
|--|---|---------|
| 1. Introduction  | Concept and definition of watershed<br>Need for SWC for forest development<br>Watershed approach for development  | 1 hours |
| 2. Hydrology   | Hydrological cycle<br>Rainfall distribution and measurement<br>Run off<br>Peak run off<br>Water balance   | 1 hours |
| 3. Soil Erosion  | Causes<br>Factors involved<br>Effects of erosion<br>Types of erosion<br>Water and wind erosion  | 2 hours |
| 4. Soil and Water Conservation Measures  | Vegetative measures. <ul style="list-style-type: none"> <li>• Contour ploughing and cultivation</li> <li>• Vegetative barriers / checks</li> </ul> Engineering measures <ul style="list-style-type: none"> <li>• Contour bunding, compartmental bunding and graded bunding</li> <li>• Contour trenches</li> <li>• Contour stone walls</li> <li>• Earthen / nala bund</li> <li>• Sunken gully pits</li> <li>• Silt traps</li> </ul> River training <ul style="list-style-type: none"> <li>• Retaining wall</li> <li>• Gabion wall</li> <li>• Revetment</li> </ul> Check dams <ul style="list-style-type: none"> <li>• Temporary</li> <li>• Brushwood</li> <li>• Boulder</li> <li>• Loose stone</li> <li>• Permanent</li> <li>• Masonry</li> </ul> Combating spread of desert <ul style="list-style-type: none"> <li>• Sand dune fixation</li> <li>• Shelterbelts</li> </ul> Water harvesting <ul style="list-style-type: none"> <li>• Percolation ponds.</li> <li>• Farm ponds.</li> </ul> | 4 hours |
| 5. SWC Measures  |   | 1 hour  |

| <b>8. Soil and Water Conservation (10 hours), Excursion 1 day , Tour 2 days</b> |  |         |
|---|--|---------|
| For different rainfall regions  |  |         |
| 6. Gadgets and Instrument   | Sedimentation rate etc.                                  | 1 hours |
| Field Study   | Study of available SWC measures during tours/excursions. |         |

| <b>9. Soil Science (5 hours), Excursion 1 day</b> |   |  |
|---|---|--|
| 1. Rocks and Soil                                 | 1-1. Rocks <ul style="list-style-type: none"> <li>· Igneous</li> <li>· Sedimentary</li> <li>· Metamorphic</li> </ul> 1-2. Soil formation <ul style="list-style-type: none"> <li>· Physical weathering</li> <li>· Chemical weathering</li> <li>· Biological weathering</li> </ul> 1-3. Soil profile and horizons<br>1-4. Soil texture, structure, water and PH<br>1-5. Important soil types and their properties <ul style="list-style-type: none"> <li>· Alluvial soils</li> <li>· Black soils</li> <li>· Red soils</li> <li>· Lateritic soils</li> <li>· Desert soils</li> <li>· Saline soils</li> <li>· Alkaline soils</li> <li>· Acid soils</li> </ul> | 3 hours<br>( 1 hour demo of various types of rock, determination of soil pH) |
| 2. Species suitable for different soil types      | Important forestry spp. of state can be discussed with reference to major soil types  | 2 hours  |
| Field Study                                       | Study of soil profile   |  |

| <b>10. Forest Survey (26 hours) Field Exercise – 1 day</b> |   |         |
|--|---|---------|
| 1. Introduction  | 1-1. Need for survey<br>1-2. Types of survey <ul style="list-style-type: none"> <li>· Chain</li> <li>· Chain and compass</li> <li>· Plane table</li> </ul>                | 1 hours |
| 2. Elementary geometry and trigonometry                    | Perimeter, area of circle, square, rectangle; volume of cylinder, cones, cubes, trapezoids; Pythagorus theorem, elementary trigonometry (Sin, Cos, Tan)                   | 8 hours |
| 3. chain and compass survey                                | <ul style="list-style-type: none"> <li>· Prismatic compass-parts-handling-testing</li> <li>· Errors and their correction</li> <li>· Precautions to be observed</li> </ul> | 5 hours |

| <b>10.Forest surveys (26 hours)</b> |   |          |
|-------------------------------------|---|----------|
|                                     | -testing the chain<br>-traverse- closed and open<br>-forward and backward bearing.<br>-local attraction and its correction<br>-method of traverse<br>-recording in the field book<br>-plotting the survey<br>-closing error and adjusting it<br>-area calculation |          |
| 4.Contour and map reading           | -definition<br>-methods of contouring<br>-instruments used<br>-contour intervals<br>Contour map reading   | 1 hour   |
| Field study                         | Practice of chain and compass survey  |          |
| <b>5. GPS</b>                       |   |          |
| 1.Basics of GPS                     | Component of GPS<br>Working of GPS receiver<br>Advantages and limitations of GPS<br>Use of GPS in the field   | 2 hour   |
| 2.Practical                         | Practice of GPS   | 5 hour   |
| Field Study                         | Application of GPS to check area of plantation, combating forest offences, use in forest protection   | (4 hour) |

| <b>11.Forest Mensuration (5 hours), excursion 1 day</b> |   |        |
|---|---|--------|
| 1.Basic mathematics                                     | Units of measurement of length, area, volume, weight, capacity and density under British and metric systems and their conversation factors            | 1 hour |
| 2.Girth/diameter and height measurement                 | -breast height<br>-use of tape- ordinary/ diameter type and calipers and their advantage and disadvantages<br>-measurement of height using altimeters | 1 hour |
| 3.Volume measurement                                    | -form factor<br>-volume of standing trees<br>-volume of logs using quarter girth formula<br>-stacked volume of firewood and use of reducing factor    | 1 hour |
| 4.Yield assessment                                      | -volume/ out-turn tables<br>-use of wedge prism and point sampling  | 1 hour |
| 5. Enumeration of growing stock                         | -total enumeration<br>-partial enumeration  | 1 hour |
| Field study   | Practice  |        |

| <b>12.Forest engineering (5 hours), excursion 1 day</b> |   |        |
|---|---|--------|
| 1.building materials & their measurements               | -stone<br>-bricks-size-number/M3<br>-lime, cement sand and metal<br>-mortar<br>-concrete-cement-RCC | 1 hour |
| 2.Building construction                                 | -site selection<br>-ground tracing<br>-Foundation   | 1 hour |

| <b>12. Forest engineering (5 hours), excursion 1 day</b> |   |        |
|--|---|--------|
|  | -flooring<br>-Doors and windows   |        |
| 3. Water supply  | -wells-dug well, tube well<br>-filtration<br>-Purification  | 1 hour |
| 2. Road  | -Types of forest roads<br>-Alignment in plains and hills<br>-hair pin bends<br>-Camber, super elevation, gradient<br>-side drains and their maintenance | 1 hour |
| Practical  | Study of parts of a building in the campus  | 1 hour |
| Field study  | Study of various types of forest roads and their parts during tour/ excursions  |        |

| <b>13. Forest utilization (7hours), excursion 1 day, tour 2 days</b> |  |         |
|--|--|---------|
| 1. Wood products (timber and firewood)                               | 1.1 Implements used for felling<br>-Axe<br>Saws-hand, power<br>1.2 conversion<br>-Logging<br>-Rough dressing and squaring<br>-machine sawing<br>-grading and stacking<br>1.3 Transport<br>-timber depots and sale of timber<br>-collection, transport stacking and disposal of fuel wood           | 4 hours |
| 2. Non- wood forest produce  | 2.1. Vegetable products<br>-bamboos<br>-canes<br>-fibres and flosses<br>-tannins and dyes.<br>-medicinal plant species<br>-edible products<br>-tendu (beedi) leaf<br>-oil seeds<br>2.2. Animal products<br>-honey<br>-Lac<br>Silkworm<br>2.3. Mineral products<br>-Mica<br>-Iron ore<br>-Manganese | 3 hours |

| <b>13. Forest utilization (7 hours), excursion 1 day, tours 2 days</b> |   |  |
|--|---|--|
|  | <ul style="list-style-type: none"> <li>-Limestone</li> <li>-Granite</li> <li>-Slate</li> </ul>  |  |
| Field Study  | <ul style="list-style-type: none"> <li>-logging operation</li> <li>-Timber/ sandalwood/ firewood depots</li> <li>-various NWFP</li> </ul> |  |

| <b>14.Forest Law (10 hours), excursion 1 day, tour 2 days</b> |   |         |
|---|---|---------|
| 1 Definition and legal classification of forests              | <ul style="list-style-type: none"> <li>-forests, forest officer, forest produce cattle, vehicles, seizure and confiscation</li> <li>-Reserved forests: reserved lands, protected forests, village forests, private forests, revenue forests and unclassified forests.</li> </ul>  | 1 hour  |
| 2.Acts related to forests                                     | Study of the important sections of the following acts: <ul style="list-style-type: none"> <li>-Indian forest act or state forest act as the case may be</li> <li>-forest conservation act, 1980</li> <li>-wildlife (protection) act, 1972</li> <li>-Tribal act</li> <li>-criminal procedure code</li> <li>-special forestry- related acts/ rules of the state concerned like sandalwood/ red sanders possession and transit rules</li> </ul>  | 3 hours |
| 3. detection of offences                                      | <ul style="list-style-type: none"> <li>-powers of forest officer</li> <li>-detection, investigation, custody of seized produce.</li> <li>-preparation and filing of offence report/ first information report.</li> <li>-preparation of seizure report</li> <li>-arrest of the accused</li> <li>- detention of accused (Human Right Issues)</li> <li>-compounding/ prosecution of the case</li> <li>-custody of seizures</li> <li>-non-bail able warrants</li> <li>-punishment for various violations</li> </ul> | 2 hours |
| 4.Forest procedure transit rules                              | <ul style="list-style-type: none"> <li>-transit of forest produce, Transit Pass, Confiscation of tools, Saw Mill Regulation Rule</li> </ul>   | 2 hours |
| Practical   | A mock session will be conducted in apprehending a forest offender and following the procedure, step by step, till the case is disposed of  | 2 hours |

| <b>15.Forest protection (10 hours), excursion 1 day, tour 4 days</b> |   |         |
|--|---|---------|
| 1.Introduction   | 1.1. Factors responsible for degradation of forests. <ul style="list-style-type: none"> <li>-cattle,</li> <li>-fire</li> <li>-flood</li> <li>-natural calamities</li> </ul> | 2 hours |

| <b>15. Forest Protection(10 hours), excursion 1 day, tour 4 days</b> |  |         |
|--|--|---------|
|  | 1.2. forest, people and tribal welfare<br>1.3. Duties, responsibilities and power of the field staff in protection of the forests.   |         |
| 2. Forest fires  | 2.1 causes, types and effect on forests.<br>2.2 prevention measures<br>-fire lines<br>-control burning<br>2.3 combative measures<br>-watch towers<br>-fire watchers<br>-use of firefighting equipment<br>-counter firing<br>2.4. fire occurrence and damage reports<br>2.5 dealing fire offences | 2 hours |
| 3. Grazing and browsing  | -effects of grazing and browsing<br>-regulation of grazing<br>-rotational grazing  | 1 hour  |
| 4. Human interfaces and their control                                | 4.1. Illicit felling<br>4.2. encroachments<br>4.3. Willful setting of fires.   | 2 hours |
| 5. Injuries by plants  | -climber<br>-weeds<br>-parasites   | 1 hour  |
| 6. Injuries due to wild animal, pests and diseases                   | - debarking, girdling by rubbing of antlers, browsing, grazing, trampling, fungal and insect attack, defoliator, heartwood borer   | 1 hour  |
| 7. Injuries due to natural calamities                                | -flood and land slide<br>-drought<br>-frost<br>-snow<br>-soil erosion  | 1 hour  |
| Field study  | Observation of fire lines etc.   |         |

| <b>16. Wildlife Management 13 hours, excursion 1 day, tour 4 days</b> |   |         |
|---|---|---------|
| 1. Introduction importance of wildlife                                | -aesthetic<br>-recreational<br>-cultural<br>-economic<br>-biological<br>-ecological   | 2 hours |
| 2. Terminologies  | -carnivore, herbivore, omnivore<br>-nocturnal and diurnal animals<br>-carrying capacity<br>-territory<br>-home range<br>-brief idea about the wildlife of the state concerned | 1 hour  |
| 3. Protection of  | -Threats  | 2 hours |

| <b>16. Wildlife management (13 hours), excursion 1 day, tour 4 days</b> |  |         |
|---|--|---------|
| Wildlife  | <ul style="list-style-type: none"> <li>-preventive and combative measures</li> <li>-wildlife (protection) act, 1972 and amendments</li> <li>-anti-poaching camps – informer network</li> </ul>   |         |
| 4.Wildlife Conservation   | <ul style="list-style-type: none"> <li>-sanctuaries and national parks</li> <li>-conservation reserve and community reserve</li> <li>- closed season</li> <li>-special conservation projects (like project tiger) of the state.</li> <li>-schedule of animals of the state</li> <li>- illegal trade in wildlife (CITES)</li> </ul> | 2 hours |
| 5.Habitat management  | <ul style="list-style-type: none"> <li>-general principles</li> <li>-salt licks</li> <li>-removal of weeds and alien species</li> <li>-water holes</li> <li>-fodder development</li> <li>-addressing firewood &amp; fodder through eco-development</li> </ul>  | 1 hour  |
| 6.Safari park, Elephant camp, Zoological park and trekking              | <ul style="list-style-type: none"> <li>- day to day management with respect to animal feed, sanitation and hygiene, captive breeding</li> <li>- managing tourists/day visitors</li> <li>-eco-tourism</li> </ul>  | 1 hour  |
| 7.Tourism management  | <ul style="list-style-type: none"> <li>-carrying capacity</li> <li>-preparing tourist guides</li> <li>-online booking</li> </ul>   | 1hour   |
| 8.Man animal conflict   | <ul style="list-style-type: none"> <li>-rescue operation, award of compensation, Eco-development</li> </ul>  | 1 hour  |
| 9.Census of wild animals  | <ul style="list-style-type: none"> <li>-census of ungulate/deer</li> <li>-census of predators</li> </ul>   | 2 hour  |
| Field study   | Visit to a national park and/ or sanctuary of the state.   | 2 days  |

| <b>17. Concept of JFM (21 hours), tour 4 days</b> |  |        |
|---|--|--------|
| 1.Definition                                      | 1.1 what is your idea of JFM, CFM?   | 1 hour |
|   | 1.2learn definition of JFM in state and national JFM guidelines (latest versions):   |        |
|   | <ul style="list-style-type: none"> <li>-what is common to all?</li> <li>-what is different?</li> <li>-if different, why?</li> <li>-what is specific to your own state?</li> </ul>  |        |
| 2.Concept   | <ul style="list-style-type: none"> <li>-why from the conventional management of forests did JFM evolve?</li> <li>-what was the status of: protection, harvest and provision of benefits in:               <ol style="list-style-type: none"> <li>1.conventional forest management</li> <li>2.Social forestry</li> <li>3.JFM</li> </ol> </li> </ul> | 1 hour |
| 3.Key principles                                  | 3.1 What is management of resources? <ul style="list-style-type: none"> <li>-what are the resources available to be managed in the forests?</li> <li>-why the resources are to be managed?</li> </ul>  | 1 hour |

|                          |  |          |
|--------------------------|--|----------|
|                          | -what is the difference of carrying capacity of forests with canopy?<br>-visualize canopy wise availability of resources. (between 0.1 and 0.4, more than 0.7)<br>3.2 what is joint management of resources?   | Annexure |
| 4. Legal position        | -what are the criteria to identify target areas?<br>Area coverage? Community?<br>-what will be the time span to be earmarked for JFM?<br>-Why? - Figure out stages of JFM programme period.<br>-what is the functional role of FD and local people?<br>- What is the legal frame that endorses the above identified factors? | 1 hour   |
| 5. Present status        | -what are the achievements so far?<br>-what are the drawbacks?<br>-vis-à-vis goals set by state JFM guidelines   | 16 hour  |
| 6. Scope and limitations | -what will be the measures to fill gaps?<br>-what will be possible limitations?  | 1 hour   |

|   |   |         |
|---|---|---------|
| <b>18. JFM stakeholders (6 hour)</b>                    |   |         |
| 1. Roles and responsibilities of different stakeholders | Do the exercise as described below in terms of production, protection, harvest and provision of benefits.<br>1. FD<br>-enumerate functions of FD and in particular those of field staff.<br>-compare the outcomes with the description in JFM guidelines.<br>2. JFMC/EDC (joint forest management committee/eco development committee)<br>- enumerate functions of FD and in particular those of field staff.<br>-compare the outcomes with the description in JFM guidelines.<br>3. SHG<br>- enumerate functions of FD and in particular those of field staff.<br>-compare the outcomes with the description in JFM guidelines.<br>4. NGO<br>-Enumerate functions of FD and in particular those of field staff.<br>-compare the outcomes with the description and linkages with other Central/ State development schemes like NREGS, JFM guidelines. | 4 hours |
| 2. what are the   |   | 1 hour  |



| <b>18. JFM stakeholders (6hours)</b>  |  |        |
|---|--|--------|
| Stakes of each stakeholder determined in JFM guidelines?  |  |        |
| 3.Discuss upon the outcomes of the above, what is your (trainees) understanding of stakeholders |  | 1 hour |

| <b>19.CBO building (6 hours)</b> |  |         |
|----------------------------------|--|---------|
| 1.Roles and responsibilities     | -discuss and determine the following for each of the actors:<br>1. roles<br>2.Responsibilities<br>3.rights:<br>4.accountable to:<br>(FD)<br>-FRO<br>-FR<br>-FG<br>(JFMC)<br>-president<br>-vice president<br>-secretary<br>-treasure<br>-executive committee members<br>-members<br>(others)<br>- Community organisations<br>-SHGs<br>-NGO workers (or any person assuming the same functions)<br>Allocate above enumerated roles, responsibilities and rights to each of the stages figured out in the previous session on stakeholders | 2 hours |
| 2.MOU and Registration           | -why MOU is necessary?<br>-examine the prototype of MOU and consider the above outcomes.<br>-what will be the measures to make each of stakeholders assimilate MOU?<br>-what will be the local specifics to be considered and integrated to MOU?   | 1 hour  |
| 3.Record keeping                 | -what will be basic records to be kept to monitor the progress of JFM?<br>-what will be the benefits of each record?   | 1 hour  |

| <b>19. CBO Building (6 hours)</b> |  |        |
|-----------------------------------|--|--------|
|                                   | <ul style="list-style-type: none"> <li>-who maintains which record?</li> <li>-for how long?</li> <li>What training will be needed to keep these records?</li> <li>-list up available records presently according to the norm set by JFM guidelines-who maintain actually?</li> <li>-how to disseminate information maintained in the records to all the stakeholders?</li> </ul>   |        |
| 4. Conducting meetings            | <ul style="list-style-type: none"> <li>-list up possible meetings of JFM?</li> <li>-describe purpose of each meeting.</li> <li>-who convenes which meeting?</li> <li>-is notice necessary to convene meeting? What will be the norms for notice determined in the bylaws?</li> <li>-what are the requirements for a meeting to be legally valid?</li> <li>-how to set agenda for a meeting?</li> <li>-what are the protocols to be observed during a meeting?</li> <li>-who keeps the record? How to record? What items to be recorded?</li> <li>-how to arrive at a conclusion? Decision? In case of debate.</li> <li>-is follow-up necessary?</li> <li>-how to follow up? Who is follow-up?</li> </ul> | 1 hour |
| 5. Fund Management                | <ul style="list-style-type: none"> <li>-what is income? Expenditure? Savings? Fund?</li> <li>-examine the prototype of bylaws and consider the above outcomes.</li> <li>-what will be the measures to make each of stakeholders assimilate bylaws?</li> <li>-what will be the local specifics to be considered and integrated to bylaws?</li> </ul>  | 1 hour |

| <b>20. PRA (24 hours), excursion 2 days</b> |  |         |
|---|--|---------|
| 1. Social map                               | <ul style="list-style-type: none"> <li>-concept of PRA</li> <li>-definition of social map and its use</li> </ul> | 3 hours |

| <b>20. PRA (24 hours), Excursion 2 days</b> |  |         |
|---|--|---------|
|   | Practice   |         |
| 2.Resource Mapping                          | -Definition of resources map and its use<br>-practice          | 3 hours |
| 3.Transect                                  | -definition of transect and its use<br>-practice               | 3 hours |
| 4. Time line                                | -Definition of timeline and its use<br>-Practice               | 3 hours |
| 5. Trend Analysis                           | -Definition of trend analysis and its use<br>-Practice         | 3 hours |
| 6.Seasonal Diagram                          | -definition of seasonal diagram and its use<br>-practice       | 3 hours |
| 7. Matrix Scoring/Ranking                   | -Definition of matrix Scoring/Ranking and its use<br>-Practice | 3 hours |
| 8.Venn Diagram                              | -definition of Venn diagram and its use<br>-practice           | 3 hours |
| Field Study                                 | Apply PRA for resource mapping. Also apply forest botany.      |         |

| <b>21. Micro Plan (18 hours), excursion 2days</b>             |   |          |
|---|---|----------|
| 1.Planning process  | -plan and action plan<br>-micro plan & "macro" plan<br>-planning process  | 1 hours  |
| 2.process and steps of MP                                     | -who to make<br>-what to describe   | 1 hour   |
| 3.methods   | -use of PRA<br>-integration of silviculture of trees and botany<br>-simple statistics   | 2 hours  |
| 4.treatment plan and management plan                          | -treatment plan<br>-management plan<br>-use of local resources for IGA in JFM   | 2 hours  |
| 5.roles and responsibilities for planning and implementing MP | -roles and responsibilities of stakeholders during planning and implementation<br>-description of roles & responsibilities of stake holders in MP | 2 hours  |
| 6.Exercise of MP  | Mock session of MP making   | 10 hours |
| Field Study   | Sample MP making in a village   |          |

| <b>22. Participatory Skills for field staff 26 hours)</b> |  |          |
|---|--|----------|
| 1.Promotion skill of CBO                                  | -Identification of field level constraints experienced (socio-economic-cultural-gender)<br>-CBO problems and contributing factors (reflection of constraints on CBO)<br>-FR, FG's belief and attitudes<br>-Community members' belief and attitudes.<br>-Inter-personal communication and skills to overcome above problems<br>- Community organisation<br>-conducting a participatory meetings<br>-conflict resolution | 15 hours |
| 2.Monitoring and follow-up'                               | -what is monitoring, why is it needed?<br>-what are the items to be monitored in JFM?  | 3 hours  |

|  |  |  |
|--|--|--|
|  | -Who does monitoring? At what intervals?<br>-How to set indicators of monitoring in a participatory way?<br>-how to keep and share the outcomes of monitoring? |  |
|--|--|--|

**22. Participatory skills for field staff ( 26 hours)**

|                         |  |         |
|-------------------------|--|---------|
|                         | what is the necessary follow- up to ease the process?  |         |
| 3.Documentation         | What are the things covered by the volunteers in their documentation?<br>Which one you consider the best? Why?<br>What are the things have to be added in the report? Why?<br>What are the items to be documented in JFM? Why?<br>Formats available? –if no, how to develop formats?<br>With whom these kinds of documents have to be shared? For what?<br>People's Bio-diversity Register | 3 hours |
| 4.JFMC vs Larger bodies | FDA, Panchayat Act & Rules, PESA, Bio-diversity Act & Rules, Forest Right Act & Rules and convergence of JFMCs with Committees under above rules   | 5 hours |

**23. Computer application (24hours)**

|                  |                         |         |
|------------------|-------------------------|---------|
| 1.OS             | Basics of OS (windows ) | 4 hours |
| 2.Internet       | Email and net browsing  | 4 hours |
| 3.Word processor | MS word                 | 8 hours |
| 4.Spread sheet   | MS Excel                | 8 hours |

**24. First Aid (7hours)**

|                                 |  |         |
|---------------------------------|--|---------|
| 1.Different First Aid Exercises |  | 7 hours |
|---------------------------------|--|---------|

**25. Seminars (4 days)**

|                             |                                   |       |
|-----------------------------|-----------------------------------|-------|
| 1.Social Forestry           | Arranged in second month          | 1 day |
| 2.Benefits from Forest      | Arranged in fourth month          | 1 day |
| 3.Gender issues in forest   | Arranged in 5 <sup>th</sup> month | 1 day |
| 4.Biodiversity Conservation | Arranged in 6 <sup>th</sup> month | 1 day |

**Note:** Classroom time will increase as we are planning participatory learning methods.

At least 4 seminars can be scheduled- Social Forestry, Gender Issues in Forestry, Ecological Services from Forest, Role of Forest Guard in Awareness Generation, Wildlife Conservation