

(Price: Rs. 3,000)

Tender For

**Construction of Germination Chamber, Mist Chamber,
Poly House and Agronet Shade House (Including
Irrigation and Electrical Network etc. complete) at Mini
Botanical Garden cum Planting Stock Production Centre
at Umdiker and Williamnagar**

By

**The Department of Forests & Environment,
Government of Meghalaya**

Last Date & Time for Submission of Tender: 29-06-2009 up to 01.00 PM

Date & Time of Opening of the Tender: 29-06-2009 at 01.30 PM

Submitted To:

**The Principal Chief Conservator of Forests
Sylvan House, Lower Lachumiere, Shillong 793 001
Meghalaya**

(Space for affixing court fee stamp of the prescribed denomination)

PART –A – Technical Bid

PART-I - TENDER FORM
(To be filled in by the tenderer)

To,
The Principal Chief Conservator of Forests,
Sylvan House, Lower Lachumiere,
Shillong 793 001, Meghalaya

Sub.: Tender for construction of germination chamber, mist chamber, poly house and agronet shed house (including irrigation and electrical network *etc.* complete) at mini botanical garden cum planting stock production centres at Umdiker and Williamnagar.

I hereby submit my tender for construction of mist chambers, poly houses and agronet shed houses (including irrigation and electrical network *etc.* complete) at mini botanical garden cum planting stock production centres at Umdiker and Williamnagar, as follows:

1. Full name of the Tenderer (in block letters):
2. Postal Address of the Tenderer:
.....
.....
.....
- Phone: Fax: E-mail:
3. Status of the Tenderer (pl. tick appropriately): Individual/ Partnership Firm/ Co-operative Society/ Joint Stock Company
4. In case of the tenderer being other than individuals, status of the person who sign the tender:.....
5. Is the tenderer a **'tribal resident'** as defined in United Khasi-Jaintia Hills District (Trading by Non-Tribal) Regulation, 1954 or in similar legislation enacted by the Garo Hills Autonomous District Council (Yes/ No):
6. Details of plants and machineries available with the Tenderer:
.....
.....
.....

.....

(Attach additional sheet(s), if required)

7. Details of staff and quality control equipments available with the tenderer:

.....

(Attach additional sheet(s), if required)

8. Details of the similar structures constructed by the tenderer during last five years w.e.f. 1st April 2004 to 31st March 2009:

8.1 Germination Chamber

Sl. No.	Name & Address of the Client	Location	Plinth area (m ²)	Value of Work (Rs. In lakhs)	Date of Start	Date of Completion	No. & date of completion certificate
1	2	3		4	5	6	7
1							
2							
3							

Sl. No.	Name & Address of the Client	Location	Plinth area (m ²)	Value of Work (Rs. In lakhs)	Date of Start	Date of Completion	No. & date of completion certificate
1	2	3		4	5	6	7
4							
5							
6							
7							
8							
10							

(attach additional sheet(s), if required)

8.2 Mist Chamber

Sl. No.	Name & Address of the Client	Location	Plinth area (m ²)	Value of Work (Rs. In lakhs)	Date of Start	Date of Completion	No. & date of completion certificate
1	2	3		4	5	6	7
1							
2							
3							
4							
5							

Sl. No.	Name & Address of the Client	Location	Plinth area (m ²)	Value of Work (Rs. In lakhs)	Date of Start	Date of Completion	No. & date of completion certificate
1	2	3		4	5	6	7
6							
7							
8							
10							
11							
12							
13							
14							
15							

(attach additional sheet(s), if required)

8.3 Poly House

Sl. No.	Name & Address of the Client	Location	Plinth area (m ²)	Value of Work (Rs. In lakhs)	Date of Start	Date of Completion	No. & date of completion certificate
1	2	3		4	5	6	7
1							
2							

Sl. No.	Name & Address of the Client	Location	Plinth area (m ²)	Value of Work (Rs. In lakhs)	Date of Start	Date of Completion	No. & date of completion certificate
1	2	3		4	5	6	7
3							
4							
5							
6							
7							
8							
10							
11							
12							
13							
14							
15							
16							

(attach additional sheet(s), if required)

8.4 Agronet Shade House

Sl. No.	Name & Address of the Client	Location	Plinth area (m ²)	Value of Work (Rs. In lakhs)	Date of Start	Date of Completion	No. & date of completion certificate
1	2	3		4	5	6	7
1							
2							
3							
4							
5							
6							
7							
8							
10							
11							
12							
13							
14							

Sl. No.	Name & Address of the Client	Location	Plinth area (m ²)	Value of Work (Rs. In lakhs)	Date of Start	Date of Completion	No. & date of completion certificate
1	2	3		4	5	6	7
15							
16							
17							
18							
19							
20							

(attach additional sheet(s), if required)

9. Annual Turnover of the Tenderer during Last Three Years:

Year	Turnover (Rupees in lakhs)	Details of documentary evidence enclosed
1	2	3
2008-09		
2007-08		
2006-07		
Total		

10. Details of post fabrication service, maintenance and training facility available with the tenderer:
-
-
-
-
-

(attach additional sheet(s), if required)

- 11. Validity for acceptance of the rates quoted by the tenderer from the date of opening of tenders (**Note:** in no case it shall be less than six months from the date of opening of tenders):

Signature & seal of the Tenderer or his Authorized Signatory

Date:

DECLARATION FORM

"I agree that I will not withdraw from the tender offered by me during the time that will be required for its acceptance, nor will I withdraw it afterwards should my tender be accepted. If I withdraw the tender then the entire amount of Earnest Money Deposit (EMD) furnished by me along with this tender will be forfeited in favour of the Government of Meghalaya.

Further certified that during last three years I have not abandoned any work nor any of the work allotted to me have been rescinded during the last three years.

Signature & seal of the Tenderer or his Authorized Signatory

Date:

WITNESS

Signature:

Name:

Address:
.....
.....

Occupation:

List of Enclosures

- (a) Earnest Money Deposit (EMD)

Sl. No.	Nature of the payment instrument*	Bank on which Drawn	Number and Date	Amount (Rs.)
1				

*: Pay Order/ Demand Draft

- (b) In case tender document is downloaded from the internet, details of cost of tender document submitted:

Sl. No.	Nature of the payment instrument	Bank on which Drawn	Number and Date	Amount (Rs.)
1				

- (c) In case court fee stamp are not affixed to the tender, details of amount deposited in lieu thereof:

Sl. No.	Nature of the payment instrument	Bank on which Drawn	Number and Date	Amount (Rs.)
1				

- (d) If the tender is submitted and signed by a person duly authorised by the tenderer to submit and sign the tender on his behalf, an attested copy of an authority empowering such person to submit and sign tender on behalf of the tenderer.
- (e) If the tenderer is a person other than a tribal resident as defined in United Khasi-Jaintia Hills District (Trading by Non-Tribal) Regulation, 1954 or in similar legislation enacted by the Garo Hills Autonomous District Council, attested copy of documentary evidence in support thereof.
- (f) A brief write-up indicating organizational structure, past performance, financial & technical expertise and ISO certification (if any) issued in favour of the tenderer.
- (g) Attested copy of work orders and completion certificates issued by the concerned competent authorities of the clients for the similar structures constructed by the tenderer during last five years, as indicated in para 7 above.
- (h) Attested copy of documentary evidence in support of plants and machineries available with the tenderer.

- (i) Attested copy of documentary evidence in support of staff and quality control equipment available with the tenderer.
- (j) Attested copy of documentary evidence in support of the annual turnover during last three years as indicated in para 9 above.
- (k) Attested copy of documentary evidence in support of the post-fabrication service, maintenance and training facility available with the tenderer as indicated in para 10 above
- (l) To the scale drawings/ layout plan indicating location & size of each structural component as well as add on features/ fixtures for each Option of specification for each structure for which rates have been quoted by the tenderer.
- (m) Detailed layout plan of irrigation, heating (in case of germination chamber and mist chamber only) and electrical supply network indicating size/ rating, location, make and model of each functional component for each Option of specification for each structure for which rates have been quoted by the tenderer.
- (n) Sample of polycarbonate sheet (4 samples of size 15 cm x 15 cm), agronet (4 samples of size 30 cm x 30 cm) and poly film (4 samples of size 30 cm x 30 cm) to be utilized for construction of germination chamber/mist chamber, agronet shade house and poly house respectively (separately for each set of specification for each structure for which rates have been quoted by the tenderer).
- (o) Sample of root trainer block (2 blocks) for which rates have been quoted by the tenderer.
- (p) Detailed brochure of each functional component to be utilized in each set of specification for construction of each structure for which rates have been quoted by the tenderer.
- (q) An optimum plant placement layout plan along with specifications and drawings of appropriate root trainer/ germination tray stands/benches and root trainers/germination trays required in each Option of specification for each structure which rates have been quoted by the tenderer.
- (r) If the tenderer is a Co-operative society, Firm or Joint Stock Company:
 - (i) Original or certified copy of the Registration Certificate from the concerned Registration authority. (enclosed/ not enclosed)
 - (ii) Certified copy of the resolution/document authorizing the person who signs the tender. (enclosed/ not enclosed)
 - (iii) Statement regarding authorised, subscribed and paid up capital. (enclosed/ not enclosed)

- (f) Up-to date Value Added Tax (VAT) or Central Sales Tax (CST) clearance certificate issued by concerned competent authority of the Government.
- (i) If the tenderer is a person other than a tribal resident as defined in United Khasi-Jaintia Hills District (Trading by Non-Tribal) Regulation, 1954 or in similar legislation enacted by the Garo Hills Autonomous District Council, and carry on wholesale or retail trade from an area to which above regulation extends, attested copy of trading license issued by the concerned competent authority of the KHADC/ GHADC/ JHADC.

Signature & Seal of the Tenderer or his Authorized Signatory

Date:

Part-II- Terms and Conditions

1. For and on behalf of the Governor of Meghalaya, the Principal Chief Conservator of Forests, Meghalaya, and Shillong (hereinafter called as 'PCCF') invites tenders containing separate technical and price bids for construction of following nursery structures along with required root trainer blocks/ germination trays as per the detailed specifications given in the schedule-I:

SI. No.	Nature of Structure	Desired Plinth area of each structure	No. of structures	Location
1	Germination Chamber	50 m ²	2	Umdiker (1 no.) and Williamnagar (1 no.)
2	Mist Chamber	500 m ²	4	Umdiker (2 nos.) and Williamnagar (2 nos.)
3	Poly House	500 m ²	4	Umdiker* (2 nos.) and Williamnagar* (2 nos.)
4	Agronet shade house	1,000 m ²	6	Umdiker (3 nos.) and Williamnagar (3 nos.)

*: Tentative/ liable to change

2. Obtaining of Tender Booklet

- (a) The eligible firms and persons may obtain the Tender booklet containing detailed specifications of the works to be executed along with terms and conditions from the Conservator of Forests (T & Dev.) at the office of the Principal Chief Conservator of Forests, Sylvan House, Lower Lachumiere, Shillong 793 001 Meghalaya on payment of Rs.3,000 (rupees three thousand only) either in cash or by crossed Demand Draft / Pay Order payable to the Conservator of Forests (T & Dev.).
- (b) Alternatively, the complete Option of the tender booklet can be downloaded from the official web site of the Meghalaya Forest Department at www.megforest.gov.in. The tenders submitted on the tender booklet downloaded from the website shall be enclosed with non-refundable demand draft or pay order for an amount of Rs. 3,000 (rupees three thousand) only drawn in favour of the Conservator of Forests (T & Dev.), Meghalaya, Shillong payable at Shillong, being the cost of the tender booklet.
- (c) Sale of tender form : **From 1st June 2009 up-to 26th June 2009**
- (d) Last date and time for receipt of completed tenders : **29th June 2009 up to 1.00 PM**
- (e) Opening of Tender : **29th June at 1.30 PM**

(c) PCCF or Government of Meghalaya shall not be responsible for any delay in sending the tender document by post. No plea of tender reaching late due to accident, traffic jam, strike etc. shall be entertained.

(d) Tender booklet is non-transferable.

3. **Qualification for Tendering**

(a). Firms and persons having past experience to construct at least three similar structures (each of the germination chamber, mist chamber, poly house and agronet shade houses) having plinth area not less than 80 % of above structures, during last five years *w.e.f.* 1st April 2004 to 31st March 2009 and having annual turnover not less than Rs. 1.00 crore (rupees one crore only) during last three years *w.e.f.* 1st April 2006 to 31st March 2009 are only eligible to submit the tender.

(b). Works supported by a completion certificate clearly indicating its date of start and date of completion duly signed by an officer of the client department/agency will only be taken into account to calculate past experience of a tenderer.

(c). If the tenderer is a person other than a tribal resident as defined in United Khasi-Jaintia Hills District (Trading by Non-Tribal) Regulation, 1954 or in similar legislation enacted by the Garo Hills Autonomous District Council, and carry his business from an area to which above regulation extends, he will be required to enclose attested copy of trading license issued by the concerned competent authority of the concerned Autonomous District Council.

(d). Similarly, If the tenderer is a person other than a tribal resident as defined in the regulations indicated in clause (c) above and carry his business from a place outside the State, he will be required to obtain trading license from the concerned Autonomous District Council and submit an attested copy of the same to the PCCF, if he is selected to execute all or any of the works for which rates have been quoted by him.

4. **Period for Completion of Work**

(a). The contractor will be required to complete the work within a period of five months from the date on which the order to commence work is given to the tenderer.

5. **Earnest Money Deposit (EMD)**

(a) Each tender shall be accompanied with refundable Earnest Money Deposit (EMD) amounting to Rs. 6,47,000 (rupees six lakh fourty seven thousand only) in the form of crossed demand draft or pay order from a scheduled commercial bank drawn in favour of the Conservator of Forests (T & Dev.), Meghalaya, Shillong payable at Shillong. Alternatively, the tenderers may submit the EMD in the form of a Fixed Deposit pledged in favour of the Conservator of Forests (T & Dev.). If the tenderer is a member of Scheduled Tribe (ST) or Scheduled Caste (SC), he may submit EMD amounting to Rs. 3,23,500 (rupees three lakh twenty three thousand five hundred only).

(b) Tenders submitted without the prescribed EMD shall be summarily rejected.

- (c) On finalization of the tender, EMD submitted by all unsuccessful tenderers shall be returned forthwith. EMD furnished by the successful tenderer (hereinafter called "contractor") shall be returned only after completion of the work assigned to him after deducting the amount as specified in this tender document which becomes liable to be deducted from the EMD.
- (d) If a tenderer attempts to withdraw the tender submitted by him after its opening or fails to sign the agreement within a period of twenty days from the date of issue of preliminary work order or fails to start the work on or before the date specified in the final work order; the EMD furnished by him may be forfeited to the revenue of the Government of Meghalaya free from all encumbrances. In case a contractor fails to complete the work assigned to him within a period specified in the tender booklet, apart from the imposition of other penalties as specified in the tender booklet; the whole or a part of the EMD as decided by the PCCF may also be forfeited to the revenue of the Government of Meghalaya free from all encumbrances.
- (e) No interest shall be payable on the EMD furnished by a tenderer.

6. Security Deposit

- (a) Security deposit amounting to 10 % (ten percent) of the gross value of running/final bill be deducted from the each running or final bill submitted by the contractor and will be retained for a period of one year from the date of the completion of the work.
- (b) In case the work executed by a contractor develops defect(s) within a period of one year from the date of its completion and the contractor fails to rectify these defects to the satisfaction of the PCCF, the PCCF or any of his subordinate duly authorised by PCCF in this regard will rectify such defects on his own and deduct the expenditure incurred on it plus fifteen per cent on the total of the aforesaid cost and price, to recover the cost of supervision (as to the amount of which cost and price a certificate of the PCCF shall be final and conclusive) from the Security Deposit deducted from the running/final bill(s) of the contractor.
- (c) No interest shall be payable on the security deposit deducted from the running/final bill(s) of the contractor.
- (d) In case under any clause or clauses of this tender, the contractor shall have rendered himself liable to pay compensation amounting to fifty percent or more of his security deposit (whether paid in one sum or deducted by installments) the PCCF on behalf of the State Government shall have power to adopt any of the following courses, as he may deem best suited to the interest of the State Government–
 - i. Rescind the contract, as to which rescission notice in writing to the contractor under the head of the PCCF shall be final and conclusive, and in which case the security deposit of the contractor shall stand forfeited, and be absolutely at the disposal of the State Government.

- ii. To employ labour paid by the Forest Department and to supply materials to carry out the work, or any part of the work, debiting the contractor with the cost of the labour and the price of the materials plus fifteen per cent on the total of the aforesaid cost and price, to recover the cost of supervision (as to the amount of which cost and price a certificate of the PCCF shall be final and conclusive) and crediting him with the value of the work done, in all respects in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract, and the certificate of the PCCF as to the value of the work done shall be final and conclusive.
 - iii. To measure up the work of the contractor and to take such a part thereof as should be executed out of his hands, and to give it to another firm or person to complete the remaining work in which case any expenses which may be incurred in excess of the sum which would have been paid to the contractor if the whole work had been executed by him (as the amount of which excess the certificate in writing of the PCCF shall be final and conclusive) shall be borne and paid by the original contractor and may be deducted from any money due to him by the State Government under the contract or otherwise or from his security deposit or the proceeds of sale thereof, or a sufficient part thereof.
 - iv. In this event of any of the above courses being adopted by the PCCF, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagements, or made any advances on account of, or with a view to the execution of the work or the performance of the contract. And in case the contract shall be rescinded under the provision aforesaid, the contractor shall not be entitled to recover or be paid any sum for any work therefore actually performed under this contract unless and until an officer not below the rank of an Assistant Conservator of Forests designated by the PCCF to supervise the work executed by the contractor (hereinafter called 'work in-charge') shall have certified in writing the performance of such work and the value payable in respect thereof, and he shall only be entitled to be paid the value so certified.
- (e) In any case in which any of the powers conferred upon the PCCF by clause (d) above shall have become exercisable and the same shall not be exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such power shall notwithstanding be exercisable in the event of any future case of defaults by the contractor for which under any clause or clauses hereof he is liable to pay compensation which with any compensation remaining unrealized amounts to fifty per cent or more of his security deposit. In the event of the PCCF putting in force either of the powers (i) or (iii) vested in him under the preceding clause he may if he so desires, take possession of all or any tools, plant, materials and store in or upon the works or

the site thereof or belonging to the contractor, or procured by him and intended to be used for the execution of the work or any part thereof paying or allowing for the same in account at the contract rates or in case of these not being applicable, at current market rate to be certified by the PCCF whose certificate thereof shall be final and conclusive; otherwise the PCCF may by notice in writing to the contractor or his Clerk of works, Foreman or other authorised agent required him to remove such tools, plant, materials or stores from the premises within a time to be specified in such notice and in event of the contractor failing comply with any such requisition, the PCCF may remove them at the contractors expense or sell them by auction or private sale on account of the contractor and at risk in all respects, and the certificate of the PCCF as to the expense of any such removal, and the amount of the proceeds and expense of any such sale be final and conclusive

7. **Court Fee Stamp**

- (a) Each tender shall be affixed with non-refundable court fee stamp of Rs. 2,000 (rupees two thousands only) denomination.
- (b) Due to non-availability or any other reasons(s) if it is not feasible for the tenderer to affix the court fee stamps of the prescribed denomination, the equivalent amount in-lieu thereof may be enclosed with the tender document in the form of crossed bank draft or pay order drawn from any scheduled commercial bank in favour of the Conservator of Forests (T & Dev.), Meghalaya payable at Shillong. Alternatively, he may deposit the amount in lieu of the court fee stamp in the treasury in dealing with the accounts of the Conservator of Forests (T & Dev.) and enclose the original treasury challan with the tender booklet.
- (c) Tenders submitted without affixing the court fee stamp or amount in lieu thereof are liable to be rejected summarily.

8. **Submission of Tender**

- (a) Each tender shall consist of separate Technical Bid and Price Bid.
- (b) Part -A of the tender booklet will constitute the Technical Bid. Similarly, Part 'B' of the tender booklet will constitute the Price Bid.
- (c) Both the Technical Bid and the Price Bid shall be filled in by making neatly typed or hand written appropriate entries by the tenderer himself or by a person duly authorised to submit and sign the tender on behalf of the tenderer (hereinafter called the 'authorised signatory').
- (d) All entries in the tender shall be made in the English language only.
- (e) **Overwriting** in the tender booklet is **strictly forbidden**. Cutting and corrections in the tender, if any, should be attested by the tenderer or authorized signatory by

affixing full signature along with date. Tenders containing non-attested over-written/ doubtful entries are liable to be rejected.

- (f) In Schedule-I of the 'Technical Bid' the tenderer shall indicate the detailed specification of each of the structures proposed to be constructed by him. If desired, the tenderer may indicate more than one sets of specifications for each structure proposed to be constructed by him.
- (g) Each set of specification for a structure proposed to be constructed by the tenderer shall be supported by following documents:
 - (i) To the scale drawings/ layout plan indicating location & size of each structural component as well as add on features/ fixtures.
 - (ii) Detailed layout plan of irrigation, heating (in case of germination chamber and mist chamber only) and electrical supply network indicating size/ rating, location, make and model of each functional component.
 - (iii) Sample of polycarbonate sheet (4 samples of size 15 cm x 15 cm), agronet (4 samples of size 30 cm x 30 cm) and poly film (4 samples of size 30 cm x 30 cm) to be utilized for construction of germination chamber/mist chamber, agronet shade house and poly house respectively.
 - (iv) Detailed brochure of each functional component to be utilized for construction of the structure.
 - (v) An optimum plant placement layout plan along with specifications and drawings of appropriate root trainer stands/benches and root trainers etc. required for each structure.
- (h) In the **Part-I** of the Price Bid the tenderer shall quote consolidated rate for each structure. Rates quoted by the tenderer shall be inclusive of the Meghalaya Value Added Tax (VAT), Central Sales Tax or any other taxes, royalty on the minor minerals to be utilized for execution of the work and other expenses to be incurred by the tenderer during execution of the works.
- (i) The rates quoted by the tenderer shall be valid for acceptance for a minimum period of six months from the date of the opening of the tender.
- (j) Conditional tenders are liable to be rejected summarily.
- (k) All pages of the tender document together with terms and conditions and the documents enclosed by the tenderer shall be signed by the tenderer or his authorised signatory. Acceptance signing of the tender form and the detailed terms

and conditions shall be deemed as the final acceptance of these terms and conditions.

- (l) In the event of space on any page being insufficient for the required purpose, additional pages may be added. Each such additional page must be numbered consequently and be signed by the tenderer. In such cases reference to the additional pages may be added in the covering letter.
- (m) A complete Technical Bid shall contain the following:
- A covering letter on the authorized letterhead of the tenderer clearly indicating complete address together with telephone, fax numbers and E-mail addresses.
 - Duly filled in Part-A of the tender booklet.
 - EMD in form of Bank draft or Pay Order or Fixed Deposit.
 - Court fee stamps of the prescribed denomination or Demand Draft/ Pay Order/ Treasury Challan for payment of amount in-lieu thereof.
 - The original or a copy of the money receipt of making payment of the cost of tender document or pay order, demand draft for the amount in-lieu thereof.
 - If the tender is submitted and signed by a person other than the tenderer himself, duly authorised by the tenderer to submit and sign the tender on his behalf, an attested copy of an authority empowering such person to submit and sign tender on behalf of the tenderer
 - If the tenderer is a person other than a tribal resident as defined in United Khasi-Jaintia Hills District (Trading by Non-Tribal) Regulation, 1954 or in similar legislation enacted by the Garo Hills Autonomous District Council, attested copy of documentary evidence in support thereof.
 - A brief write-up indicating organizational structure, past performance, financial & technical expertise and ISO certification (if any) issued in favour of the tenderer.
 - Attested copy of work orders and completion certificates issued by the concerned competent authorities of the clients for the similar structures constructed by the tenderer during last five years as indicated in para 7 in part-I of the tender document.
 - Attested copy of documentary evidence in support of plants and machineries available with the tenderer.
 - Attested copy of documentary evidence in support of staff and quality control equipment available with the tenderer.

- Attested copy of documentary evidence in support of the annual turnover during last three years as indicated in para 9 in part-I of the tender document.
- Attested copy of documentary evidence in support of the post-fabrication service, maintenance and training facility available with the tenderer as indicated in para 10 in part-I of the tender document.
- To the scale drawings/ layout plan indicating location & size of each structural component as well as add on features/ fixtures for each Option of specification for each structure for which rates have been quoted by the tenderer.
- Detailed layout plan of irrigation, heating (in case of germination chamber and mist chamber only) and electrical supply network indicating size/ rating, location, make and model of each functional component for each set of specifications for each structure for which rates have been quoted by the tenderer.
- Sample of polycarbonate sheet (4 samples of size 15 cm x 15 cm), agronet (4 samples of size 30 cm x 30 cm) and poly film (4 samples of size 30 cm x 30 cm) to be utilized for construction of germination chamber/mist chamber, agronet shade house and poly house respectively (separately for each set of specification for each structure for which rates have been quoted by the tenderer).
- Sample of root trainer block (2 blocks) for which rates have been quoted by the tenderer.
- Detailed brochure of each functional component to be utilized in each set of specification for construction of each structure for which rates have been quoted by the tenderer.
- An optimum plant placement plan along with specifications and drawings of appropriate root trainer (in case of mist chamber and agronet shade house only)/ germination tray (in case of germination chamber only) stands/benches along with detailed specifications of root trainers (in case of mist chamber and agronet shade house only) /germination trays (in case of germination chamber only) required in each set of specification for each structure for which rates have been quoted by the tenderer.
 - (i) If the tenderer is a Co-operative society, Firm or Joint Stock Company
 - (ii) Original or certified copy of the Registration Certificate from the concerned Registration authority. (enclosed/ not enclosed)
 - (iii) Certified copy of the resolution/document authorizing the person who signs the tender. (enclosed/ not enclosed)

- (iv) Statement regarding authorised, subscribed and paid up capital.
(enclosed/ not enclosed)
- Up-to date Value Added Tax (VAT) or Central Sales Tax (CST) clearance certificate issued by concerned competent authority of the Government.
 - If the tenderer is a person other than a tribal resident as defined in United Khasi-Jaintia Hills District (Trading by Non-Tribal) Regulation, 1954 or in similar legislation enacted by the Garo Hills Autonomous District Council, and carry on wholesale or retail trade from an area to which above regulation extends, attested copy of trading license issued by the concerned competent authority of the KHADC/ GHADC/ JHADC.
- (n) All documents mentioned in the clause (m) above, shall be fully secured and put into a sufficiently large envelope which should be sealed and super-scribed **“Technical Bid for construction of germination chamber, mist chamber, poly house and agronet shade house due to be opened on 29-06-2009”**
- (o) Similarly, the Price Bid shall consist duly filled in Part-B of the Tender Booklet. In the Price Bid the consolidated rate for each structure shall be quoted in para 5 of part-I as well as designated place in schedule-I appended to the price bid.
- (p) The Price Bid shall be put into a separate envelop which should be sealed and super-scribed **“Price Bid for construction of germination chamber, mist chamber, poly house and agronet shade house due to be opened on 29-06-2009”**
- (q) Both the sealed envelopes containing Technical Bid and Price Bid shall be put into a sufficiently large envelope which should be sealed and super-scribed **“Technical & Price Bid for construction of germination chamber, mist chamber, poly house and agronet shade house due to be opened on 29-06-2009”**
- (r) The envelop containing the Technical Bid and Price Bid shall be addressed to the Principal Chief Conservator of Forests, Sylvan House, Lower Lachumiere, Shillong-793 001, Meghalaya.
- (s) The tenderer should affix his full address on left bottom corner of the envelope containing the Technical Bid & Price Bid separately as well as on the envelope containing both the Technical and Price Bid.
- (t) The envelope containing the completed Technical Bid and Price Bid shall reach to the office of the Principal Chief Conservator of Forests, Sylvan House, Lower Lachumiere, Shillong-793 001, Meghalaya on or before the due date and time prescribed in the para 2 above. If desired, the tenderer may put the envelop

containing tender directly in a Tender Box kept at the reception counter in the office of the Principal Chief Conservator of Forests, Sylvan House, Lower Lachumiere, Shillong -793 001, Meghalaya.

- (u) Immediately after the last date and time prescribed for the receipt of tenders, the tender box will be sealed in the presence of the tenderers or their representatives. In no case, tenders received after due date and time shall be accepted. The PCCF or the Government of Meghalaya shall not be responsible for any delay in submission of a tender. All tenders received after the due date and time shall be returned to the respective tenderer without opening the same.
- (v) Due to any unavoidable reason(s), if the office of the PCCF remains closed on the date prescribed for opening of the tenders, the tenders will be opened on the next working day at the same venue and the same time.

9. Opening of Tenders

- (a) Tenders shall be opened by an officer or a committee of officers authorised/constituted authorised by the PCCF in this regard, in the presence of the tenderers or their representatives duly authorised by them, at the office of the Principal Chief Conservator of Forests, Sylvan House, Lower Lachumiere, Shillong-793 001, Meghalaya on the date and time indicated in para 2 above.
- (b) Due to any unavoidable reason(s) if the office of the PCCF remains closed on the date prescribed for opening of the tender, the tenders shall be opened on the next working day without any change in the venue and time.
- (c) Following procedure shall be adopted for opening of tenders:
 - Immediately after opening of the tender box, total number of tenders received and the name of tenderers will be announced to all the tenderers or their representatives present during the opening of the tenders and the same will also be entered in the tender opening minute register.
 - The sealed envelop received from various tenders will be opened one by one in the same order in which their name have been entered in the tender opening minute register. The sealed envelopes containing Technical Bids and Price Bids shall be segregated and will be initialed by the officer or group of officers authorised by PCCF for opening of tenders and **without opening** all sealed envelops containg Price Bids will be put into a separate envelope which would be sealed and super-scribed "**Price Bids for construction of mist chambers, poly houses and agronet shed houses received from (no.) tenderers in the tenders opened on 29.05.2009**"
 - Envelope containing Technical Bids will however be opened in the same order in which they have been entered in the tender opening minute register. After

opening the sealed cover, each page of the Technical Bids will be initialed by the officer or group of officers authorised by PCCF for opening of tenders and details of EMD, court fee stamp or amount in lieu thereof and the original money receipt in respect of the cost of tender document will be entered in the tender opening minute registers. All tenders received without prescribed EMD, court fee stamp or amount in lieu thereof and the original or a copy of money receipt for payment of the cost of tender document are liable to be summarily rejected.

- After opening all the sealed covers the details furnished by the tenderer in part-I of the tender document by each tenderer shall be read out one by one for information of all the tenderers or their representative present during opening of the tenders.

10. Evaluation and Finalization of the Tenders

- (a) All valid Technical Bids received shall be evaluated by a 'Technical Evaluation Committee' consisting of suitable officials having adequate technical knowledge, constituted by the PCCF.
- (b) The technical evaluation committee will thoroughly scrutinize the technical bids and keeping in view the past experience, turn over during last three years, availability of construction equipment, machineries and technical and supervisory personnel with the tenderer, specifications of the structures proposed to be constructed by the tenderers and any other information as it deem fit and proper; will shortlist and rank the tenderers who are technically eligible to execute the work.
- (c) Before finalization of its recommendations, the technical evaluation committee may request all or any of the tenderer to make a detailed presentations/ demonstration or submit a full scale sample of the critical components proposed to be utilized by the tenderers for construction of the structures for which rates have been quoted by the tenderer(s). No payment shall however be made for expenditure to be incurred in making such presentation/ demonstration or submission of such samples. Samples submitted by all unsuccessful tenderers shall however be returned back to the respective tenderer after finalization of supply order for the concerned item. Similarly, the sample submitted by the successful tenderer may either be utilized in construction of the concerned structure or may be returned after successful supply and installation of such component in the concerned structure by the successful tenderer. **To ensure expeditious settlement of tenders, first meeting of technical evaluation committee is proposed to be convened at 1.30 PM on the first working day after opening of tenders. All interested tenderers may make presentation highlighting salient features of the structures proposed to be constructed by them, before the technical evaluation committee on the date and time indicated here-in-above.**
- (d) On completion of the technical evaluation, PCCF will place the report of the technical evaluation committee along with Technical Bids and an authenticated comparative statement before the Departmental Tender Committee of the Forest & Environment Department having composition as prescribed in the Meghalaya

(Delegation of Financial Powers) Rules, 2006, as amended from time to time, for taking necessary action for its concurrence and confirmation of the report of the 'Technical Evaluation Committee'.

- (e) The Departmental Tender Committee will critically scrutinize and confirm the recommendation of the technical evaluation committee; with or without modifications; as it deem fit and proper and finalize a list containing name and rank of the tenderers who are found to be technically eligible to execute the work.
- (f) On finalization of a list containing name and rank of the tenderers who are found to be technically eligible to execute the work, the PCCF will intimate to all such technically eligible tenderers the date, time and venue for opening their price bids. On such day, time and venue, price bids of only eligible tenderers who are shortlisted by the Departmental Tender Committee will be opened in the presence of such tenderers or their representative(s). The price bids of all other tenderers who have not been found to be technically eligible to execute the work by the Departmental Tender Committee will be returned, unopened to the respective tenderers, under acknowledgement.
- (g) After opening the Price Bids, the PCCF will analyse the price bids and place before Departmental Tender Committee an authenticated Comparative Statement along with his speaking recommendations as to the tenderer in whose favour order is to be placed, for consideration and decision of the Departmental Tender Committee.
- (h) On receipt of an authenticated comparative statement along with speaking recommendations of PCCF, the Departmental Tender Committee will take the decision as to the tenderer in whose favour order for execution of the work is to be placed. In case the rates quoted by the tenderer recommended by the PCCF is higher than the prevailing market rates, the Departmental Tender Committee may invite him for negotiation to reduce the rates or may decide to call fresh tenderers. The Departmental Tender Committee will also have the discretion to call a fresh tender if during the negotiation the lowest tenderer refuses to reduce the rates to the satisfaction of the Departmental Tender Committee.
- (i) The PCCF or any of his superior authority in the Government of Meghalaya reserves the right to accept or reject all or any tender, wholly or partially, without assigning any reason(s) thereof.
- (j) The PCCF or any of his superior authority of the Government of Meghalaya reserves the right to cancel or withdraw this notice inviting tenders at any time without assigning any reason(s) thereof.
- (k) Rates quoted by a tenderer shall remain valid for acceptance for a minimum period of six months from the date of the opening of the tenders. Any unsolicited correspondence by any tenderer after opening of tenders is liable to render the tender submitted by him as invalid.

11. Placement of the Work Order

- (a) On receipt of the approval from the concerned competent authority, the PCCF or any other officer authorised by PCCF in this regard, may place preliminary work order in favour of the successful tenderer(s) requesting him/them to sign an agreement to abide with the terms and conditions contained in the Tender Booklet with the PCCF or any of his subordinate as indicated in the preliminary order within a period of twenty days from the date of issue of the preliminary work order.
- (b) Within five days from the date of signing of the agreement, the PCCF or any other officers authorised by PCCF in this regard will issue the final work order clearly indicating the date of start and completion of the work.
- (c) Along with the final work order all required approved working drawings, both architectural and structural, and copy of detailed specifications will be provided to the contractor, free of cost.

12. Execution of Work

- (a) The contractor shall execute the whole and every part of the work in the most substantial and workman like manner, and both as regards materials and otherwise in every respect, in strict accordance with the true intent and meaning of the drawing and specification. The contractor shall also confirm exactly, fully and faithfully to the true intent and meaning of design drawing and instructions in writing relating to the work signed by the work in-charge not below the rank of a Divisional Forest Officer and lodged in his office, and to which the contractor be entitled to have access at such office or on the site of the work for the purpose of inspection during office hours.
- (b) In case, construction of all or any structure requires execution of any additional civil work in the form of retaining wall, approach road or any other nature of civil work over and above the quantity of civil work indicated in the detailed specification indicated in Schedule-I, the contractor shall be required to execute all such work at the rate entered in the Meghalaya Public Works Department Schedule of Rates for Building Works -2007-08.

13. Making of Payment

- (a) Payment will be made after successful completion of a structure strictly as per the approved specifications and drawings.
- (b) On completion of a structure the contractor will prepare a bill on the printed forms. Charges in the bill shall always be entered at the rates specified in the tender or in the case of any extra work ordered in pursuance of these conditions, and mentioned or provided for in the tender, at the rates here-in-after provided for such work and submit the same to the work in-charge.
- (c) On receipt of the bill, the work in-charge will make or cause to make the payment through crossed cheques or Demand draft drawn in favour of the contractor after making deduction of security deposit, value added tax (VAT), income tax, royalty on the minor minerals utilized by the contractor and all other statutory taxes and duties for the time being in force.

- (d) The work in-charge reserves the right of non-acceptance of works, which have not been executed as per the prescribed specification.
- (e) Bank commission charged for demand draft will be borne by the contractors and the same will be deducted from his payment.

14. Penalty for Non-Execution or Late Execution of Works

- (a) The time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor and shall be reckoned from the date on which the order to commence work is given to the contractor. The work shall throughout the stipulated period of the contract be proceeded with, with all due diligence (time being deemed to be of the essence of the contract on the part of the contractor) and the contractor shall pay as compensation an amount of equal to one percent or such smaller amount as the PCCF (whose decision in writing shall be final) may decide on the amount of the estimated cost of the whole work as shown by the tenderer for every day that the work remains uncompleted or unfinished, after the proper dates. And further, to ensure good progress during the execution of the work, the contractor shall be bound, in all cases in which the time allowed for any work exceeds one month, to complete one-fourth of the whole of the work before one-fourth of the whole time allowed under the contract has elapsed, one-half of the work before one-half of such time has elapsed, and three fourth of the work before three-fourths of such time has elapsed, such estimation of the amount of work done at any period being made by the PCCF whose decision shall be final. In the event of the contractor failing to comply with the conditions he shall be liable to pay as compensation an amount equal to one percent, or such small amount as the PCCF (whose decision in writing shall be final and conclusive) may decide on the said estimated cost of the whole work for every day that the due quantity of work remains incomplete. Provided always that the entire amount of compensation to be paid under the provisions of this clause shall not exceed 10 percent on the estimated cost of the work as shown in the tender.
- (b) If the contractor shall desire an extension of the time for completion of the work on the ground of his having been unavoidably hindered in its execution or on any other grounds, he shall apply in writing to the PCCF through the work in-charge within 30 days of the date of the hindrance or date of the occurrence or commencement of the aforesaid other grounds on account of which he desires such extension as aforesaid, and the PCCF shall, if in his opinion (which shall be final and conclusive) reasonable grounds be shown thereof, authorize such extension of time, if any, as may, in his opinion, be necessary or proper.

15. Completion Certificate

- (a) The contractor shall give the work in-charge notice in writing when the work is completed and on receipt of such notice, the work in-charge or his subordinate shall inspect the work and if completed shall make an entry in the measurement book to this effect. The contractor shall then be furnished with a certificate by the work in-charge of such completion but no such certificate shall be given nor shall the work be considered to be complete until the contractor shall have removed from the premises, on which the work shall be executed all scaffolding, surplus materials and rubbish; and shall have cleaned off all dirt from all wood-work, doors, windows, walls, floors or other parts of any structures in, upon or about which the work has been executed or of which he may have had possession for the purpose of the execution thereof. If the contractor shall fail to comply with the requirement of this clause as to removal of scaffolding, surplus, materials and rubbish, and cleaning off dirt on or before the date fixed for the completion of the work, the work in-charge may at the expenses of the contractor remove such scaffolding, surplus material and rubbish and dispose of the same as he thinks fit and clean off such dirt as aforesaid and the contractor shall forthwith, pay the amount of all expenses so incurred plus fifteen per cent, supervision charges, and shall have no claim in respect of any scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof.

16. Methodology to Lodge Protest

- (a) If the contractor considers any work demanded of him to be outside the requirements of the contract, or considers any record or ruling of the work in-charge to be unfair, he shall immediately upon such work being demanded or such record or ruling being made, ask for written instructions or decision, and within ten (10) days after the date of receipt of the written instructions or decisions, he shall file a written protest with the work in-charge, stating clearly and in details the basis of his objections. Except for such protests or objections as are made in the manner herein specified and within the time limit stated, the records, ruling instructions or decision of the work in-charge shall be final and conclusive.

17. Reduction in the Quantity of Work

- (a) If at any time after the commencement of the work the PCCF shall for any reason whatsoever not require the whole thereof as specified in the tender to be carried out, the work in-charge shall give notice in writing of the fact to the contractor who shall have no claim to any payment or compensation whatsoever on account of any profit or advantage, which he might have derived from the execution of the work in full, but which he did not derive in consequence of the full amount of the work not having been carried out.

18 Action and Compensation Payable in Case of Bad Work

- (a) If it shall appear to the work in-charge that the work has been executed with unsound, imperfect or unskillful workmanship or with materials of any inferior description, or that any materials articles provided by contractor for the execution of the work are unsound, or a quality inferior to that contracted for or otherwise not in accordance with the contract, he shall demand in writing from the contractor specifying the work materials or articles complained notwithstanding that the same may have been inadvertently passed, certified and paid for forthwith rectify, or remove and reconstruct the work so specifying in whole or in part as the case may require, or as the case may be remove the materials or articles so specified and provide the suitable materials or articles at his own proper charge and cost and in the event of his failing to do so within a period to be specified by the work in-charge in his demand aforesaid that the contractor shall be liable to pay compensation at the rate of one percent on the amount of the contract for every day not exceeding ten days while his failure to do so shall continue and in case of contractor's continued failure over and above the ten days specified above, the work in-charge may rectify or remove and re-execute the work or remove and replace with others, the materials or articles complain of, as the case may be, at the risk and expense in all respect of the contractor and charge the contractor for the work in sub-clause (d) (ii) of Para 6 above.

19. Work To Be Open to the Inspection

- (a) All work in course of execution or executed in pursuance of the contract shall at all times be open to inspection and supervision of the work in-charge and his subordinates, and the contractor shall at all times during the usual working hours and at all times at which reasonable notice of the intent of the work in-charge or his subordinate to visit the work shall have been given to the contractor; either himself be present to receive order and instruction, or have a responsible agent duly accredited in writing present for that purpose. Orders given to the contractor's agent shall be considered to have the same force if they had been given to the contractor himself.

20. Notice To Be Given Before Work is Covered Up

- (a) The contractor shall give not less than five days notice in writing to the work in-charge before covering up or otherwise placing beyond the reach of measurement or inspection of any work in order that the same may be inspected or measured and correct dimensions thereof be taken before the same is so covered up or placed beyond the reach of measurement or inspection. And if any work shall be covered up or placed beyond the reach of measurement of inspection without such notice having

been given or consent obtained in writing the same shall be uncovered at the contractors expense or in default thereof no payment shall be made for such work or the materials with which, the same was executed.

21. Contractor Liable For Damage Done and Imperfection Observed

- (a) If the contractor or his work-people or servants shall break, deface, injure or destroy any part of a structure in which they may be working or any building road, fence, enclosure or grassland or cultivated ground contiguous to the premises on which the work or a part of it is being executed or any damage shall happen to the work while in progress from any cause whatever or any imperfections apparent in it within one year after a certificate final or order of its completion shall have been given by the work in-charge as aforesaid, the contractor shall make the same good at his own expense, or in default, the work in-charge may cause the same to be made good by other workman and deduct the cost (of which the certificate to the work in-charge shall be final and conclusive) plus fifteen percent supervision charges from any sums that may be then to at any time there-after may become due to the contractor or from his security deposits or the proceeds of sale or of a sufficient portion thereof.

22. Contractor to Supply Plant, Ladder, Scaffolding etc.

- (a) The contractor shall supply at his own cost all materials (except such materials, if any, as may in accordance with the contract be supplied from the work in-charge), plant, tools, appliances, implements, ladder, scaffolding and temporary work requisites or proper for the execution of work, whether original, altered or substituted; and whether included in the specification or other documents forming part of the contract or referred to in those conditions or not or which may be necessary for the purpose of satisfying or complying with the requirements of the work in-charge as to any matter which under these conditions he is entitled to be satisfied, or which he is entitled to require together with carriage therefore to and from the work. The contractor shall also supply without charge the requisite number of persons with the means and materials necessary for the purpose of setting out of works for the accuracy of which he is entirely responsible, and for counting, weighting and assisting in the measurement or submission at any time and from time to time of the work or materials. Failing his doing the same may be provided by the work in-charge at the expense of the contractor and the expenses may be deducted from any money due to the contractor under the contracts, or from his security deposit or the proceeds of sale thereof, or of a sufficient portion thereof. The contractor shall also provide necessary fencing, lights and notice required to protect the work from accident, and shall be bound to bear the expenses of defense or every suit, action or other proceedings of law that may be brought by any person for injury sustained owing to neglect of the above precautions, and to pay any damages and costs which may be awarded in any such suit, action or proceedings to any such person or which may

with the consent of the contractor be paid to compromise any claim by any such person.

19 Prohibition of Engagement of Persons below Fourteen Years

- (a) No labourer below the age of fourteen years shall be employed on the work.

20. Prohibition to Work on Sundays

- (a) No work shall be done on Sundays without the sanction in writing of the work in-charge.

21. Prohibition to Sublet

- (a) The contract shall not be assigned or sub-let without the written approval of the work in-charge. And if the contractor shall assign or sub-let his contract, or attempt to do so, or become insolvent or commence any insolvency proceedings or make any composition with his creditors, or attempt so to do, or if any bribe, gratuity, gift, loan perquisite, reward or advantage, pecuniary or otherwise, shall either directly or indirectly be given, promised, or offered by the contractor, or any of his servants or agents to any public officer or person in the employ of the Government of Meghalaya in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the work in-charge may thereupon by notice in writing rescind the contract, and the security deposit of the contractor shall thereupon stand forfeited and be absolutely at the disposal of the State Government and the same consequences shall ensue as if the contract has been rescinded under sub-clause (d) of para 6 thereof, and in addition the contractor shall not be entitled to recover or be paid for any work actually performed under the contract.

22. Reasonability of Amount Payable as Compensation

- (a) All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of the State Government without reference to the actual loss or damage sustained, and whether or not any damage shall have been sustained.

23. Changes in Constitution of Firm

- (a) In the case of a tender by partners any change in the constitution of the firm shall be forthwith notified by the contractor to the work in-charge for his information.

24. Work to Under Direction of the Work In-charge

- (a) All works to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the work in-charge for the time being, who

shall be entitled to direct at what points and in what manner they are to be commenced and from time to time carried on.

25. Payment of Minimum Wages

- (a) The contractor shall pay his labourers not less than the minimum wages prescribed by the Department of Labour, Government of Meghalaya.

26. Action Where No Specification Prescribed

- (a) In the case of any class of work for which there is no such specification, the work shall be carried out in all respects in accordance with the instructions and requirements of the work in-charge.

27. Expression “Works” or “Work”

- (a) The expression “works” or “work” where used in these conditions shall unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional.

28. Interpretation

- (a) Except where otherwise specified in the contract the decision of the PCCF for the time being shall be final, conclusive and binding on all parties to the contract upon all questions relating to the meaning of the specifications, designs, drawings, and instructions hereinbefore mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specification, estimates, instruction, orders of these conditions, or otherwise concerning the works or the execution, or failure to execute the same whether arising during the progress of the work, or after the completion or abandonment thereof.

(V.K. Nautiyal, IFS)

Principal Chief Conservator of Forests,
Meghalaya, Shillong

CERTIFICATE OF ACCEPTANCE OF TERMS AND CONDITIONS

I / We have read and fully understood the terms and conditions as laid down above in respect of the **“Tender for construction of germination chamber, mist chamber, poly house and agronet shade house due to be opened on 29-06-2009”**.

I/We agree to abide by the same.

I/We have signed all the pages of the tender document as laid down.

Signature and Seal of the
Tenderer or his Authorized Signatory
Dated :.....

Address:
.....
.....

Phone:Fax:
Email:

Schedule-I**Desired Specifications of Structures to Be Constructed****1. Germination Chamber****1.1 Desired Specification of Germination Chamber**

- **Unit Area:** 50 sqm plinth area
- **Nos. of span:** 1
- **Size of Each Span:** 10.00 m x 5.00 m x 11.50 ft x 8.20 ft. (L x W x CH x SH)
- **Buffer Chamber:** 7 ft. x 7 ft. with double door. Door size 2.00 m x 1.00 m each
- **Shape/ Design:** Aerodynamic Dome/ Hut shape.
- **Structure:** Non corrosive welded structure with good strength and design as per IS875 standard consisting of trusses, column, ridge and supporting pipe at proper interval made up of GI rectangular pipe of 50.00 mm x 50.00 mm \pm 1.00 mm or equivalent, 38.00 mm x 38.00 mm \pm 1.00 mm or equivalent and 32.00 mm x 32.00 mm \pm 1 mm with thickness of 2.00 mm.
- **Covering:** UV stabilized thermo clear 10 mm multi-wall polycarbonate sheet with 81% light transmission and 2 TS structure on the top and sides fixed with polycarbonate 'U' & 'H' profile and aluminium strip, all the joints of sheet properly sealed with silicon sealant to avoid leakage. Polycarbonate sheet should be treated with exclusive anti fungal compounds to enhance its life.
- **Roof screen:** 50 % shade UV stabilized agro shed net with rolling arrangement and connecting gear box system.
- **Cooling System:** Evaporating cooling system consisting of two (2) 54" belt driven slow speed axial fan and 5.00 m x 1.53 m. x 100 mm (length x height x thickness) cellulose cooling pad fitted in aluminium frame complete with all necessary framing material as required to support distribution and return aluminum gutters, down spout end caps and drip pan, plumbing kit fitted with drilled PVC piping cap, pad retainer, all suspension hardware, metal flashing as required to seal pad to vent opening, 100 mm thick evaporative cooling pad material, cooling pad accessories, 20 mm dia. PVC over flow drain, 40 mm dia. standard sink drain & five hundred (500) liter PVC water tank (Sintex make) fitted with 220 volt 1 phase 50 cycles heavy duty water circulation pump. The fan and pad should be covered with 40 mesh nylon insect proof net.
- **Mist irrigation System:** Heavy-duty mist irrigation system consisting of fin mist/ fogging nozzles, heavy duty pump of required pressure/ discharge, PVC tank of 500 lt. capacity, screen filter, control valves complete with all necessary fitting etc. along with a suitable timer having capacity to maintain 90 % humidity in the mist chamber.

- **Heating system:** A heating system consisting of two (2) numbers 2.4 KW (each) capacity heat convector fitted with auto cutoff thermal device and fan blower of standard design to maintain uniform high temperature in the mist chamber during winter season.
- **Electric Fitting/ Control Panel:** Consisting of copper wire and ISI mark switches, MCB etc. complete as per requirements. Digital/ microprocessor based controller to automatically regulate temperature & humidity. Two normal tube lights along with photoperiodic light controller.
- **Germination Tray Stands/Benches:** MS angle iron Stands/ benches to hold and support germination trays.
- **Germination Trays:** Plastic germination trays of appropriate size.
- **Curtain wall:** 23 cm wide 45 cm above ground level, 45 cm below ground level duly plastered and painted (with weather proof exterior wall paint) curtain wall provided on all sides of the germination chamber.
- **Flooring:** 40 mm thick 1:2:4 (1-cement: 2-sand, 4- stone aggregates) cement concrete anti slippery floor laid over 75 mm thick 1:4:8 (1-cement: 4-sand: 8- stone aggregates) cement concrete base with proper drainage slops.
- **Foundation:** Grouting of vertical posts in 1:3:6 (1-cement: 3- sand: 6- stone aggregates) cement concrete blocks of 30 cm x 30 cm x 75 cm size below ground level.
- **Plinth Protection:** 45 cm wide, 35 mm thick 1:3:6 (1-cement: 3-sand: 6- stone aggregates) cement concrete layer laid over 75 mm thick 1:4:8 (1-cement: 4-sand: 8- stone aggregates) cement concrete base with proper drainage slopes.
- **Standby/ Spare Components:** To ensure uninterrupted operation even during breakdown of individual component each pump shall be provided with standby pump of similar rating along with necessary piping, fittings and instant switchover fittings/ valves. Similarly, quantity as indicated below for the components having the specifications similar to the corresponding components fitted in the mist chamber shall be provided as spare in the loose form to ensure quick replacement during breakdown of any component:

Component	Spare Quantity
Axial fan fitted in evaporative cooling system	One (1) number
Fogging/ mist irrigation nozzles in mist irrigation system	Ten percent (10 %) of the number of nozzles fitted in the mist chamber
Heat convector with fan blower and auto cut off thermal device	One (1) sets
Filter fitted in mist irrigation system	One (1) number

Digital/ microprocessor based controller to automatically regulate temperature & humidity	One (1) number
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- **Training & After Sales Service:** The tenderer shall depute a suitable technical person for at-least thirty (30) working days to impart hands on training to at-least five field functionaries of the department on operation of the germination chamber.

Components	Make	Model	Size/ Capacity/ Rating/ important features
Agronet			
GI pipes utilized in super-structure			
Axial fan fitted in evaporative cooling system			
Water circulation pump in evaporative cooling system			
Storage tank in evaporative cooling system			
Heat convector in heating system			
Fan blower in heating system			
Auto cutoff thermal device in heating system			
Nozzles in mist irrigation system			
Water circulation pump in mist irrigation system			

Components	Make	Model	Size/ Capacity/ Rating/ important features
Filter in mist irrigation system			
Control valve in mist irrigation system			
Feeder pipe in mist irrigation system			
Distribution pipe in mist irrigation system			
Storage tank in mist irrigation system			
Copper wire to provide electricity supply to axial fans in evaporative cooling system			
Copper wire to provide electricity supply to water pump in evaporative cooling system			
Copper wire to provide electricity supply to heat convector in heating system			

Components	Make	Model	Size/ Capacity/ Rating/ important features
Switches in electrical system			
Circuit breakers in electrical system			
Electrical panels			
Digital/ microprocessor based controller in electrical system			

- 1.2.1.3 To the scale drawing/ layout plan indicating location & size of each structural component (pillars, span) as well as add-on features/ fixtures enclosed (yes/ no):
- 1.2.1.4 Detailed layout plan of the mist irrigation system indicating size, rating, location, make and model of each functional component (fogging nozzles, feeder pipe, distribution pipe, pump, filter, control valves, storage tank etc.) enclosed (yes/ no):
- 1.2.1.5 Detailed layout plan of the electrical system indicating size, rating, location, make and model of each functional component (wire, switch, control panel, circuit breaker etc.) enclosed (yes/ no):
- 1.2.1.6 Detailed layout plan of the heating system indicating rating, location, make and model of each functional component (heater, blower, enclosed (yes/ no):
- 1.2.1.7 Sample of polycarbonate sheet (4 samples of size 15 cm x 15 cm), agronet (4 samples of size 30 cm x 30 cm) to be utilized for construction of mist chamber enclosed (yes/ no):
- 1.2.1.8 Optimum plant placement layout plan along with specifications and drawings of appropriate root trainer stands/benches along with support structures, fitting, fixtures etc. enclosed (yes/ no.)
- 1.2.1.9 Estimated per batch cumulative germination tray holding area (sqm): sqm
- 1.2.1.10 Estimated weight of GI square pipes utilized for fabrication of superstructure: kg

Note: In case actual weight of GI square pipes utilized for fabrication of superstructure is less than the above indicated estimated weight an amount @ Rs. 100 for every kg of shortfall will be deducted from the passed bill of the tenderer.

1.2.1.11 Estimated weight of the germination tray stands/ benches along with support structures, fitting, fixtures etc. : Kg

Note: In case actual weight of root trainer stand/ benches along with support structures, fitting, fixtures etc. is less than the above indicated estimated weight an amount @ Rs. 75 per for every kg of shortfall will be deducted from the passed bill of the tenderer.

1.2.1.12 Name of components (polycarbonate sheet, agroshed net, heat convector, nozzle, evaporative cooling system fan, pumps etc.) to be utilized for construction of mist chamber for which brochure containing detailed specifications has been enclosed;

- (i)
- (ii)
- (iii)
- (iv)
- (v)
- (vi)

Signature & seal of the Tenderer or his Authorized Signatory
Date:

Components	Make	Model	Size/ Capacity/ Rating/ important features
Axial fan fitted in evaporative cooling system			
Water circulation pump in evaporative cooling system			
Storage tank in evaporative cooling system			
Heat convector in heating system			
Fan blower in heating system			
Auto cutoff thermal device in heating system			
Nozzles in mist irrigation system			
Water circulation pump in mist irrigation system			
Filter in mist irrigation system			
Control valve in mist irrigation system			

Components	Make	Model	Size/ Capacity/ Rating/ important features
Feeder pipe in mist irrigation system			
Distribution pipe in mist irrigation system			
Storage tank in mist irrigation system			
Copper wire to provide electricity supply to axial fans in evaporative cooling system			
Copper wire to provide electricity supply to water pump in evaporative cooling system			
Copper wire to provide electricity supply to heat convector in heating system			
Switches in electrical system			
Circuit breakers in electrical system			

Components	Make	Model	Size/ Capacity/ Rating/ important features
Electrical panels			
Digital/ microprocessor based controller in electrical system			

- 1.2.2.3 To the scale drawing/ layout plan indicating location & size of each structural component (pillars, span) as well as add on features/ fixtures enclosed (yes/ no):
- 1.2.2.4 Detailed layout plan of the mist irrigation system indicating size, rating, location, make and model of each functional component (fogging nozzles, feeder pipe, distribution pipe, pump, filter, control valves, storage tank etc.) enclosed (yes/ no):
- 1.2.2.5 Detailed layout plan of the electrical system indicating size, rating, location, make and model of each functional component (wire, switch, control panel, circuit breaker etc.) enclosed (yes/ no):
- 1.2.2.6 Detailed layout plan of the heating system indicating rating, location, make and model of each functional component (heater, blower, enclosed (yes/ no):
- 1.2.2.7 Sample of polycarbonate sheet (4 samples of size 15 cm x 15 cm), agronet (4 samples of size 30 cm x 30 cm) to be utilized for construction of mist chamber enclosed (yes/ no):
- 1.2.2.8 Optimum plant placement layout plan along with specifications and drawings of appropriate root trainer stands/benches along with support structures, fitting, fixtures etc. enclosed (yes/ no.)
- 1.2.2.9 Estimated per batch cumulative germination tray holding area (sqm): sqm
- 1.2.2.10 Estimated weight of GI square pipes utilized for fabrication of superstructure: kg
- Note:** In case actual weight of GI square pipes utilized for fabrication of superstructure is less than the above indicated estimated weight an amount @ Rs. 100 for every kg of shortfall will be deducted from the passed bill of the tenderer.
- 1.2.2.11 Estimated weight of germination tray stands/ benches along with support structures, fitting, fixtures etc. : Kg

Note: In case actual weight of root trainer stand/ benches along with support structures, fitting, fixtures etc. is less than the above indicated estimated weight an amount @ Rs. 75 for every kg of shortfall will be deducted from the passed bill of the tenderer.

1.2.2.12 Name of component (polycarbonate sheet, agroshed net, heat convector, nozzle, evaporative cooling system fan, pumps etc.) to be utilized for construction of mist chamber for which brochure containing detailed specifications has been enclosed:

- (i)
- (ii)
- (iii)
- (iv)
- (v)
- (vi)
- (vii)
- (viii)

Signature & seal of the Tenderer or his Authorized Signatory

Date:

Components	Make	Model	Size/ Capacity/ Rating/ important features
GI pipes utilized in super-structure			
Axial fan fitted in evaporative cooling system			
Water circulation pump in evaporative cooling system			
Storage tank in evaporative cooling system			
Heat convector in heating system			
Fan blower in heating system			
Auto cutoff thermal device in heating system			
Nozzles in mist irrigation system			
Water circulation pump in mist irrigation system			
Filter in mist irrigation system			
Control valve in mist irrigation system			
Feeder pipe in mist irrigation system			

Components	Make	Model	Size/ Capacity/ Rating/ important features
Distribution pipe in mist irrigation system			
Storage tank in mist irrigation system			
Copper wire to provide electricity supply to axial fans in evaporative cooling system			
Copper wire to provide electricity supply to water pump in evaporative cooling system			
Copper wire to provide electricity supply to heat convector in heating system			
Switches in electrical system			
Circuit breakers in electrical system			
Electrical panels			
Digital/ microprocessor based controller in electrical system			

- 1.2.3.3 To the scale drawing/ layout plan indicating location & size of each structural component (pillars, span) as well as add on features/ fixtures enclosed (yes/ no):
- 1.2.3.4 Detailed layout plan of the mist irrigation system indicating size, rating, location, make and model of each functional component (fogging nozzles, feeder pipe, distribution pipe, pump, filter, control valves, storage tank etc.) enclosed (yes/ no):
- 1.2.3.5 Detailed layout plan of the electrical system indicating size, rating, location, make and model of each functional component (wire, switch, control panel, circuit breaker etc.) enclosed (yes/ no):
- 1.2.3.6 Detailed layout plan of the heating system indicating rating, location, make and model of each functional component (heater, blower, enclosed (yes/ no):
- 1.2.3.7 Sample of polycarbonate sheet (4 samples of size 15 cm x 15 cm), agronet (4 samples of size 30 cm x 30 cm) to be utilized for construction of mist chamber enclosed (yes/ no):
- 1.2.3.8 Optimum plant placement layout plan along with specifications and drawings of appropriate root trainer stands/benches along with support structures, fitting, fixtures etc. enclosed (yes/ no.)
- 1.2.3.9 Estimated per batch cumulative germination tray holding area (sqm): sqm
- 1.2.3.10 Estimated weight of GI square pipes utilized for fabrication of superstructure: kg

Note: In case actual weight of GI square pipes utilized for fabrication of superstructure is less than the above indicated estimated weight an amount @ Rs. 100 for every kg of shortfall will be deducted from the passed bill of the tenderer.

- 1.2.3.11 Estimated weight of germination tray stands/ benches along with support structures, fitting, fixtures etc. : Kg

Note: In case actual weight of root trainer stand/ benches along with support structures, fitting, fixtures etc. is less than the above indicated estimated weight an amount @ Rs. 75 for every kg of shortfall will be deducted from the passed bill of the tenderer.

- 1.2.3.12 Name of component (polycarbonate sheet, agrosched net, heat convector, nozzle, evaporative cooling system fan, pumps etc.) to be utilized for construction of mist chamber for which brochure containing detailed specifications has been enclosed:
 - (i)
 - (ii)
 - (iii)
 - (iv)
 - (v)

Signature & seal of the Tenderer or his Authorized Signatory
Date:

2. Mist Chamber

2.1 Desired Specification of Mist Chamber

- **Unit Area:** 500 sqm plinth area
- **Nos. of span:** 3
- **Size of Each Span:** 62.00 ft. x 29.00 ft. x 12.00 ft. x 8.00 ft. (L x W x CH x SH)
- **Buffer Chamber:** 7 ft. x 7 ft. with double door. Door size 2.00 m x 1.00 m each
- **Shape/ Design:** Aerodynamic Dome/ Hut shape.
- **Structure:** Non corrosive welded structure with good strength and design as per IS875 standard consisting of trusses, column, ridge and supporting pipe at proper interval made up of GI rectangular pipe of 82 mm (± 1 mm) x 145 (± 1 mm) x 3.2 mm or equivalent size in pillars and 50 (± 1 mm) x 50 (± 1 mm) x 2 mm in spans.
- **Covering:** UV stabilized thermo clear 10 mm multi-wall polycarbonate sheet with 81% light transmission and 2 TS structure on the top and sides fixed with polycarbonate 'U' & 'H' profile and aluminium strip, all the joints of sheet properly sealed with silicon sealant to avoid leakage. Polycarbonate sheet should be treated with exclusive anti fungal treatment to enhance its life.
- **Roof screen:** 50 % shade UV stabilized agro shed net with rolling arrangement and connecting gear box system.
- **Cooling System:** Evaporating cooling system consisting of four (4) 1400 mm (54") belt driven slow speed axial fan and 26.50 m x 1.53 m. x 100 mm (length x height x thickness) cellulose cooling pad fitted in aluminium frame complete with all necessary framing material as required to support distribution and return aluminum gutters, down spout end caps and drip pan, plumbing kit fitted with drilled PVC piping cap, pad retainer, all suspension hardware, metal flashing as required to seal pad to vent opening, 100 mm thick evaporative cooling pad material, cooling pad accessories, 20 mm dia. PVC over flow drain, 40 mm dia. standard sink drain & one thousand (1000) liter PVC water tank (Sintex make) fitted with 220 volt 1 phase 50 cycles heavy duty water circulation pump. The fan and pad should be covered with 40 mesh nylon insect proof net.
- **Mist irrigation System:** Heavy-duty mist irrigation system consisting of fin mist/ fogging nozzles, 2.0/ 3.0 HP heavy duty pump of required pressure/ discharge (along with an stand by pump), PVC tank of 2000 lt. capacity, screen filter, control valves complete with all necessary fitting etc. along with a suitable timer having capacity to maintain 90 % humidity in the mist chamber.
- **Heating system:** A heating system consisting of nine (9) numbers 2.4 KW (each) capacity heat convector fitted with auto cutoff thermal device and fan blower of standard design to maintain uniform high temperature in the mist chamber during winter season.

- **Electric Fitting/ Control Panel:** Consisting of copper wire and ISI mark switches, MCB etc. complete as per requirements. Digital/ microprocessor based controller to automatically regulate temperature & humidity. Two normal tube lights in each span along with photoperiodic light controller.
- **Gutter:** GI sheet gutter having minimum 18 gauge thickness.
- **Root Trainer Benches/ Stands:** MS angle iron benches or root trainer stand to hold and support root trainers. To ensure high floor area utilization, preferably the mist chamber be provided with movable root trainer benches/stands with suitable support and guide rails.
- **Root trainer:** The mist chamber be provided with Root trainer blocks consisting of twenty (20) cells each having volume of 150 cc having following detailed dimensions/ specifications:
 - Top Inside dia.: 50 mm
 - Bottom dia: 20 mm
 - Taper: At 15 mm from bottom
 - Inside dia. at taper: 42 mm
 - Length: 100 mm
 - Ridge: 6 nos. equidistance
 - Outer rim at top: 3.2 mm
 - Thickness: At-least 2 mm
 - Colour: Black (Ultra-violet Resistant)
 - Materials: Injection Grade Virgin PPL
 - Volume: 150 cc
 - Weight: At-least 600 gm with accuracy of not less than +-10 gm
 - Total size of block: 295 mm x 235 mm
 - Shapes & cavity: Block Type 20 Holes (5x 4)
- **Curtain wall:** 23 cm wide 45 cm above ground level, 45 cm below ground level duly plastered and painted (with weather proof exterior wall paint) curtain wall provided on all sides of the mist chamber.
- **Flooring:** 40 mm thick 1:2:4 (1-cement: 2-sand, 4- stone aggregates) cement concrete anti slippery floor laid over 75 mm thick 1:4:8 (1-cement: 4-sand: 8- stone aggregates) cement concrete base with proper drainage slops.
- **Foundation:** Grouting of vertical posts in 1:3:6 (1-cement: 3- sand: 6- stone aggregates) cement concrete blocks of 30 cm x 30 cm x 75 cm size below ground level.
- **Plinth Protection:** 45 cm wide, 35 mm thick 1:3:6 (1-cement: 3-sand: 6- stone aggregates) cement concrete layer laid over 75 mm thick 1:4:8 (1-cement: 4-sand: 8- stone aggregates) cement concrete base with proper drainage slopes.
- **Standby/ Spare Components:** To ensure uninterrupted operation even during breakdown of individual component each pump shall be provided with standby pump of similar rating along

with necessary piping, fittings and instant switchover fittings/ valves. Similarly, quantity as indicated below for the components having the specifications similar to the corresponding components fitted in the mist chamber shall be provided as spare in the loose form to ensure quick replacement during breakdown of any component:

Component	Spare Quantity
Axial fan fitted in evaporative cooling system	One (1) number
Fogging/ mist irrigation nozzles in mist irrigation system	Ten percent (10 %) of the number of nozzles fitted in the mist chamber
Heat convector with fan blower and auto cut off thermal device	Two (2) sets
Filter fitted in mist irrigation system	One (1) number
Digital/ microprocessor based controller to automatically regulate temperature & humidity	One (1) number

- **Training & After Sales Service:** The tenderer shall depute a suitable technical person for at-least thirty (30) working days to impart hands on training to at-least five field functionaries of the department on operation of mist chamber.

Components	Make	Model	Size/ Capacity/ Rating/ important features
GI pipes utilized in super-structure			
Axial fan fitted in evaporative cooling system			
Water circulation pump in evaporative cooling system			
Storage tank in evaporative cooling system			
Heat convector in heating system			
Fan blower in heating system			
Auto cutoff thermal device in heating system			
Nozzles in mist irrigation system			
Water circulation pump in mist irrigation system			
Filter in mist irrigation system			

Components	Make	Model	Size/ Capacity/ Rating/ important features
Control valve in mist irrigation system			
Feeder pipe in mist irrigation system			
Distribution pipe in mist irrigation system			
Storage tank in mist irrigation system			
Copper wire to provide electricity supply to axial fans in evaporative cooling system			
Copper wire to provide electricity supply to water pump in evaporative cooling system			
Copper wire to provide electricity supply to heat convector in heating system			
Switches in electrical system			

Components	Make	Model	Size/ Capacity/ Rating/ important features
Circuit breakers in electrical system			
Electrical panels			
Digital/ microprocessor based controller in electrical system			

- 2.2.1.3 To the scale drawing/ layout plan indicating location & size of each structural component (pillars, span) as well as add on features/ fixtures enclosed (yes/ no):
- 2.2.1.4 Detailed layout plan of the mist irrigation system indicating size, rating, location, make and model of each functional component (fogging nozzles, feeder pipe, distribution pipe, pump, filter, control valves, storage tank etc.) enclosed (yes/ no):
- 2.2.1.5 Detailed layout plan of the electrical system indicating size, rating, location, make and model of each functional component (wire, switch, control panel, circuit breaker etc.) enclosed (yes/ no):
- 2.2.1.6 Detailed layout plan of the heating system indicating rating, location, make and model of each functional component (heater, blower, enclosed (yes/ no):
- 2.2.1.7 Sample of polycarbonate sheet (4 samples of size 15 cm x 15 cm), agronet (4 samples of size 30 cm x 30 cm) to be utilized for construction of mist chamber enclosed (yes/ no):
- 2.2.1.8 Optimum plant placement layout plan along with specifications and drawings of appropriate root trainer stands/benches along with support structures, fitting, fixtures etc. enclosed (yes/ no.)
- 2.2.1.9 Estimated per batch plant holding capacity (no. of plants):
- 2.2.1.10 Estimated weight of GI square pipes utilized for fabrication of superstructure: kg

Note: In case actual weight of GI square pipes utilized for fabrication of superstructure is less than the above indicated estimated weight an amount @ Rs. 100 for every kg of shortfall will be deducted from the passed bill of the tenderer.

2.2.1.11 Estimated weight of root trainer stands/ benches along with support structures, fitting, fixtures etc.: Kg

Note: In case actual weight of root trainer stand/ benches along with support structures, fitting, fixtures etc. is less than the above indicated estimated weight an amount @ Rs. 75 for every kg of shortfall will be deducted from the passed bill of the tenderer.

2.2.1.12 Name of components (polycarbonate sheet, agroshed net, heat convector, nozzle, evaporative cooling system fan, pumps etc.) to be utilized for construction of mist chamber for which brochure containing detailed specifications has been enclosed;

- (i)
- (ii)
- (iii)
- (iv)
- (v)
- (vi)
- (vii)
- (viii)

Signature & seal of the Tenderer or his Authorized Signatory
Date:

Components	Make	Model	Size/ Capacity/ Rating/ important features
Axial fan fitted in evaporative cooling system			
Water circulation pump in evaporative cooling system			
Storage tank in evaporative cooling system			
Heat convector in heating system			
Fan blower in heating system			
Auto cutoff thermal device in heating system			
Nozzles in mist irrigation system			
Water circulation pump in mist irrigation system			
Filter in mist irrigation system			
Control valve in mist irrigation system			
Feeder pipe in mist irrigation system			
Distribution pipe in mist irrigation system			

Components	Make	Model	Size/ Capacity/ Rating/ important features
Storage tank in mist irrigation system			
Copper wire to provide electricity supply to axial fans in evaporative cooling system			
Copper wire to provide electricity supply to water pump in evaporative cooling system			
Copper wire to provide electricity supply to heat convector in heating system			
Switches in electrical system			
Circuit breakers in electrical system			
Electrical panels			
Digital/ microprocessor based controller in electrical system			

2.2.2.3 To the scale drawing/ layout plan indicating location & size of each structural component (pillars, span) as well as add on features/ fixtures enclosed (yes/ no):

.....

- 2.2.2.4 Detailed layout plan of the mist irrigation system indicating size, rating, location, make and model of each functional component (fogging nozzles, feeder pipe, distribution pipe, pump, filter, control valves, storage tank etc.) enclosed (yes/ no):
- 2.2.2.5 Detailed layout plan of the electrical system indicating size, rating, location, make and model of each functional component (wire, switch, control panel, circuit breaker etc.) enclosed (yes/ no):
- 2.2.2.6 Detailed layout plan of the heating system indicating rating, location, make and model of each functional component (heater, blower, enclosed (yes/ no):
- 2.2.2.7 Sample of polycarbonate sheet (4 samples of size 15 cm x 15 cm), agronet (4 samples of size 30 cm x 30 cm) to be utilized for construction of mist chamber enclosed (yes/ no):
- 2.2.2.8 Optimum plant placement layout plan along with specifications and drawings of appropriate root trainer stands/benches along with support structures, fitting, fixtures etc. enclosed (yes/ no.)
- 2.2.2.9 Estimated per batch plant holding capacity (no. of plants):
- 2.2.2.10 Estimated weight of GI square pipes utilized for fabrication of superstructure: kg

Note: In case actual weight of GI square pipes utilized for fabrication of superstructure is less than the above indicated estimated weight an amount @ Rs. 100 for every kg of shortfall will be deducted from the passed bill of the tenderer.

- 2.2.2.11 Estimated weight of root trainer stands/ benches along with support structures, fitting, fixtures etc. : Kg

Note: In case actual weight of root trainer stand/ benches along with support structures, fitting, fixtures etc. is less than the above indicated estimated weight an amount @ Rs. 75 for every kg of shortfall will be deducted from the passed bill of the tenderer.

- 2.2.2.12 Name of component (polycarbonate sheet, agrosched net, heat convector, nozzle, evaporative cooling system fan, pumps etc.) to be utilized for construction of mist chamber for which brochure containing detailed specifications has been enclosed:

- (i)
- (ii)
- (iii)
- (iv)
- (v)
- (vi)

Signature & seal of the Tenderer or his Authorized Signatory
Date:

2.2.3 **Specification of the Mist Chamber Proposed to be Constructed by the Tenderer as Option-3** (please strike out para 2.2.3.1 to para 2.2.3.12 if the tenderer does not wish to quote the rates)

2.2.3.1 Summary of Difference between the Desired Specification Indicated in Para 2.1 above and specifications of the Mist Chamber Proposed to be Constructed by the Tenderer:

Component	Desired Specification	Specification of the component proposed to be provided

(attach additional sheet(s), if required)

2.2.3.2 Make, Model, Rating/important feature of Important components and Materials To be Utilized for Construction of Mist Chamber

Components	Make	Model	Size/ Capacity/ Rating/ important features
Poly carbonate Sheet			
Agronet			
GI pipes utilized in super-structure			

Components	Make	Model	Size/ Capacity/ Rating/ important features
Axial fan fitted in evaporative cooling system			
Water circulation pump in evaporative cooling system			
Storage tank in evaporative cooling system			
Heat convector in heating system			
Fan blower in heating system			
Auto cutoff thermal device in heating system			
Nozzles in mist irrigation system			
Water circulation pump in mist irrigation system			
Filter in mist irrigation system			
Control valve in mist irrigation system			
Feeder pipe in mist irrigation system			
Distribution pipe in mist irrigation system			

Components	Make	Model	Size/ Capacity/ Rating/ important features
Storage tank in mist irrigation system			
Copper wire to provide electricity supply to axial fans in evaporative cooling system			
Copper wire to provide electricity supply to water pump in evaporative cooling system			
Copper wire to provide electricity supply to heat convector in heating system			
Switches in electrical system			
Circuit breakers in electrical system			
Electrical panels			
Digital/ microprocessor based controller in electrical system			

2.2.3.3 To the scale drawing/ layout plan indicating location & size of each structural component (pillars, span) as well as add on features/ fixtures enclosed (yes/ no):

- 2.2.3.4 Detailed layout plan of the mist irrigation system indicating size, rating, location, make and model of each functional component (fogging nozzles, feeder pipe, distribution pipe, pump, filter, control valves, storage tank etc.) enclosed (yes/ no):
- 2.2.3.5 Detailed layout plan of the electrical system indicating size, rating, location, make and model of each functional component (wire, switch, control panel, circuit breaker etc.) enclosed (yes/ no):
- 2.2.3.6 Detailed layout plan of the heating system indicating rating, location, make and model of each functional component (heater, blower, enclosed (yes/ no):
- 2.2.3.7 Sample of polycarbonate sheet (4 samples of size 15 cm x 15 cm), agronet (4 samples of size 30 cm x 30 cm) to be utilized for construction of mist chamber enclosed (yes/ no):
- 2.2.3.8 Optimum plant placement layout plan along with specifications and drawings of appropriate root trainer stands/benches along with support structures, fitting, fixtures etc. enclosed (yes/ no.)
- 2.2.3.9 Estimated per batch plant holding capacity (no. of plants):
- 2.2.3.10 Estimated weight of GI square pipes utilized for fabrication of superstructure: kg

Note: In case actual weight of GI square pipes utilized for fabrication of superstructure is less than the above indicated estimated weight an amount @ Rs. 100 for every kg of shortfall will be deducted from the passed bill of the tenderer.

- 2.2.3.11 Estimated weight of root trainer stands/ benches along with support structures, fitting, fixtures etc. : Kg

Note: In case actual weight of root trainer stand/ benches along with support structures, fitting, fixtures etc. is less than the above indicated estimated weight an amount @ Rs. 75 for every kg of shortfall will be deducted from the passed bill of the tenderer.

- 2.2.3.12 Name of component (polycarbonate sheet, agroshred net, heat convector, nozzle, evaporative cooling system fan, pumps etc.) to be utilized for construction of mist chamber for which brochure containing detailed specifications has been enclosed:

- (i)
- (ii)
- (iii)
- (iv)
- (v)
- (vi)

Signature & seal of the Tenderer or his Authorized Signatory
Date:

3. Poly House

3.1 Desired Specification of Poly House

- **Unit Area:** 500 sqm plinth area
- **Nos. of span:** 3
- **Size of Each Span:** 62.00 ft. x 29.00 ft. x 12.00 ft. x 8.00 ft. (L x W x CH x SH)
- **Buffer Chamber:** 7 ft. x 7 ft. with double door. Door size 2.00 m x 1.00 m each
- **Shape/ Design:** Aerodynamic Dome/ Hut shape.
- **Structure:** Non-corrosive welded structure with good strength and design as per IS875 standard consisting of trusses, column, ridge and supporting pipe at proper interval made up of GI rectangular pipe of 50.00 mm x 50.00 mm \pm 1.00 mm or equivalent, 38.00 mm x 38.00 mm \pm 1.00 mm or equivalent and 32.00 mm x 32.00 mm \pm 1 mm with thickness of 2.00 mm.
- **Covering:** UV stabilized triple layer 200 μ thick poly film of reputed make fixed with aluminium profile and spring to the MS welded pipe superstructure.
- **Roof screen:** 50 % shade UV stabilized agro shed net with rolling arrangement and connecting gear box system.
- **Mist Irrigation System:** Heavy-duty mist irrigation system consisting of fin mist/ fogging nozzles, heavy duty pump of required pressure/ discharge, PVC tank of 500 lt. capacity, screen filter, control valves complete with all necessary fitting etc. along with a suitable timer having capacity to maintain 90 % humidity in the mist chamber.
- **Ventilation:** Side ventilation along with rolling arrangement and connecting gear system.
- **Electric Fitting/ Control Panel:** Consisting of copper wire and ISI mark switches, MCB etc. complete as per requirements. Digital/ microprocessor based controller to automatically regulate temperature & humidity. Two normal tube lights along with photoperiodic light controller.
- **Curtain wall:** 23 cm wide 45 cm above ground level, 45 cm below ground level duly plastered and painted (with weather proof exterior wall paint) curtain wall provided on all sides of the germination chamber.
- **Foundation:** Grouting of vertical posts in 1:3:6 (1-cement: 3- sand: 6- stone aggregates) cement concrete blocks of 30 cm x 30 cm x 75 cm size below ground level.
- **Plinth Protection:** 45 cm wide, 35 mm thick 1:3:6 (1-cement: 3-sand: 6- stone aggregates) cement concrete layer laid over 75 mm thick 1:4:8 (1-cement: 4-sand: 8- stone aggregates) cement concrete base with proper drainage slopes.
- **Standby/ Spare Components:** To ensure uninterrupted operation even during breakdown of individual component each pump shall be provided with standby pump of similar rating along with necessary piping, fittings and instant switchover fittings/ valves. Similarly, quantity as

indicated below for the components having the specifications similar to the corresponding components fitted in the mist chamber shall be provided as spare in the loose form to ensure quick replacement during breakdown of any component:

Component	Spare Quantity
Fogging/ mist irrigation nozzles in mist irrigation system	Ten percent (10 %) of the number of nozzles fitted in the mist chamber
Filter fitted in mist irrigation system	One (1) number

- **Training & After Sales Service:** The tenderer shall depute a suitable technical person for at-least thirty (30) working days to impart hands on training to at-least five field functionaries of the department on operation of the germination chamber.

Components	Make	Model	Size/ Capacity/ Rating/ important features
Water circulation pump in mist irrigation system			
Filter in mist irrigation system			
Control valve in mist irrigation system			
Feeder pipe in mist irrigation system			
Distribution pipe in mist irrigation system			
Storage tank in mist irrigation system			
Copper wire to provide electricity supply to water pump in mist irrigation system			
Switches in electrical system			
Circuit breakers in electrical system			
Electrical panels			

3.2.1.3 To the scale drawing/ layout plan indicating location & size of each structural component (pillars, span) as well as add on features/ fixtures enclosed (yes/ no):

.....

- 3.2.1.4 Detailed layout plan of the mist irrigation system indicating size, rating, location, make and model of each functional component (nozzle, feeder pipe, distribution pipe, pump, filter, control valves, storage tank etc.) enclosed (yes/ no):
- 3.2.1.5 Detailed layout plan of the electrical system indicating size, rating, location, make and model of each functional component (wire, switch, control panel, circuit breaker etc.) enclosed (yes/ no):
- 3.2.1.6 Detailed layout plan of the heating system indicating rating, location, make and model of each functional component (heater, blower, enclosed (yes/ no):
- 3.2.1.7 Sample of poly film (4 samples of size 30 cm x 30 cm) to be utilized for construction of poly house enclosed (yes/ no):
- 3.2.1.8 Optimum plant placement layout plan along with specifications and drawings of appropriate root trainer stands/benches along with support structures, fitting, fixtures etc. enclosed (yes/ no.)
- 3.2.1.9 Estimated weight of GI square pipes utilized for fabrication of superstructure: kg

Note: In case actual weight of GI square pipes utilized for fabrication of superstructure is less than the above indicated estimated weight an amount @ Rs. 100 for every kg of shortfall will be deducted from the passed bill of the tenderer.

- 3.2.1.10 Name of components (poly film, agrosched net, nozzle, pumps etc.) to be utilized for construction of mist chamber for which brochure containing detailed specifications has been enclosed;
- (i)
- (ii)
- (iii)
- (iv)
- (v)
- (vi)

Signature & seal of the Tenderer or his Authorized Signatory

Date:

3.2.2 Specification of the Poly House Proposed to be Constructed by the Tenderer as Option-2 (pl. strike out para 3.2.2.1 to para 3.2.2.10 if the tenderer does not wish to quote the rates)

3.2.2.1 Summary of Difference between the Desired Specification Indicated in Para 3.1 above and specifications of the Poly House proposed to be constructed by the tenderer:

Component	Desired Specification	Specification of the component proposed to be provided

(attach additional sheet(s), if required)

3.2.2.2 Make, Model, Rating/important feature of Important components and Materials To be Utilized for Construction of Poly House

Components	Make	Model	Size/ Capacity/ Rating/ important features
UV Stabilized Poly film			
Agronet			
GI pipes utilized in super-structure			
Nozzles in mist irrigation system			

Components	Make	Model	Size/ Capacity/ Rating/ important features
Water circulation pump in mist irrigation system			
Filter in mist irrigation system			
Control valve in mist irrigation system			
Feeder pipe in mist irrigation system			
Distribution pipe in mist irrigation system			
Storage tank in mist irrigation system			
Copper wire to provide electricity supply to water pump in mist irrigation system			
Switches in electrical system			
Circuit breakers in electrical system			
Electrical panels			

3.2.2.3 To the scale drawing/ layout plan indicating location & size of each structural component (pillars, span) as well as add on features/ fixtures enclosed (yes/ no):

.....

- 3.2.2.4 Detailed layout plan of the mist irrigation system indicating size, rating, location, make and model of each functional component (nozzle, feeder pipe, distribution pipe, pump, filter, control valves, storage tank etc.) enclosed (yes/ no):
- 3.2.2.5 Detailed layout plan of the electrical system indicating size, rating, location, make and model of each functional component (wire, switch, control panel, circuit breaker etc.) enclosed (yes/ no):
- 3.2.2.6 Detailed layout plan of the heating system indicating rating, location, make and model of each functional component (heater, blower, enclosed (yes/ no):
- 3.2.2.7 Sample of poly film (4 samples of size 30 cm x 30 cm) to be utilized for construction of poly house enclosed (yes/ no):
- 3.2.2.8 Optimum plant placement layout plan along with specifications and drawings of appropriate root trainer stands/benches along with support structures, fitting, fixtures etc. enclosed (yes/ no.)
- 3.2.2.9 Estimated weight of GI square pipes utilized for fabrication of superstructure: kg

Note: In case actual weight of GI square pipes utilized for fabrication of superstructure is less than the above indicated estimated weight an amount @ Rs. 100 for every kg of shortfall will be deducted from the passed bill of the tenderer.

- 3.2.2.10 Name of components (poly film, agrosched net, nozzle, pumps etc.) to be utilized for construction of mist chamber for which brochure containing detailed specifications has been enclosed;
- (i)
- (ii)
- (iii)
- (iv)
- (v)
- (vi)

Signature & seal of the Tenderer or his Authorized Signatory

Date:

3.2.3 Specification of the Poly House Proposed to be Constructed by the Tenderer as Option-3 *(pl. strike out para 3.2.3.1 to para 3.2.3.10 if the tenderer does not wish to quote the rates)*

3.2.3.1 Summary of Difference between the Desired Specification Indicated in Para 3.1 above and specifications of the Poly House proposed to be constructed by the tenderer:

Component	Desired Specification	Specification of the component proposed to be provided

(attach additional sheet(s), if required)

3.2.3.2 Make, Model, Rating/important feature of Important components and Materials To be Utilized for Construction of Poly House

Components	Make	Model	Size/ Capacity/ Rating/ important features
UV Stabilized Poly film			
Agronet			
GI pipes utilized in super-structure			
Nozzles in mist irrigation system			

Components	Make	Model	Size/ Capacity/ Rating/ important features
Water circulation pump in mist irrigation system			
Filter in mist irrigation system			
Control valve in mist irrigation system			
Feeder pipe in mist irrigation system			
Distribution pipe in mist irrigation system			
Storage tank in mist irrigation system			
Copper wire to provide electricity supply to water pump in mist irrigation system			
Switches in electrical system			
Circuit breakers in electrical system			
Electrical panels			

3.2.3.3 To the scale drawing/ layout plan indicating location & size of each structural component (pillars, span) as well as add on features/ fixtures enclosed (yes/ no):

.....

- 3.2.3.4 Detailed layout plan of the mist irrigation system indicating size, rating, location, make and model of each functional component (nozzle, feeder pipe, distribution pipe, pump, filter, control valves, storage tank etc.) enclosed (yes/ no):
- 3.2.3.5 Detailed layout plan of the electrical system indicating size, rating, location, make and model of each functional component (wire, switch, control panel, circuit breaker etc.) enclosed (yes/ no):
- 3.2.3.6 Detailed layout plan of the heating system indicating rating, location, make and model of each functional component (heater, blower, enclosed (yes/ no):
- 3.2.3.7 Sample of poly film (4 samples of size 30 cm x 30 cm) to be utilized for construction of poly house enclosed (yes/ no):
- 3.2.3.8 Optimum plant placement layout plan along with specifications and drawings of appropriate root trainer stands/benches along with support structures, fitting, fixtures etc. enclosed (yes/ no.)
- 3.2.3.9 Estimated weight of GI square pipes utilized for fabrication of superstructure: kg

Note: In case actual weight of GI square pipes utilized for fabrication of superstructure is less than the above indicated estimated weight an amount @ Rs. 100 for every kg of shortfall will be deducted from the passed bill of the tenderer.

- 3.2.3.10 Name of components (poly film, agrosched net, nozzle, pumps etc.) to be utilized for construction of mist chamber for which brochure containing detailed specifications has been enclosed;
 - (i)
 - (ii)
 - (iii)
 - (iv)
 - (v)
 - (vi)

Signature & seal of the Tenderer or his Authorized Signatory
Date:

4. Agronet Shade House

4.1 Desired Specifications of Agronet Shade House

- **Unit Area:** 1,000 sqm plinth area
- **Nos. of span:** 6
- **Size of Each Span:** 60.00 ft. x 30.00 ft. x 5.00 m x 11.50 ft x 8.20 ft. (L x W x CH x SH)
- **Shape/ Design:** Aerodynamic Dome/ Hut shape.
- **Structure:** Non-corrosive welded structure with good strength and design as per IS875 standard consisting of trusses, column, ridge and supporting pipe at proper interval made up of GI rectangular pipe of 50.00 mm x 50.00 mm \pm 1.00 mm or equivalent, 38.00 mm x 38.00 mm \pm 1.00 mm or equivalent and 32.00 mm x 32.00 mm \pm 1 mm with thickness of 2.00 mm.
- **Covering:** 50 % shade UV stabilized green colour agro shed net attached to the GI pipe superstructure with a specially designed aluminium profile and spring. The profile and spring should have the ability of clipping out and re-use to replace old/ torn out agronet with new agronet.
- **Mist irrigation System:** Heavy-duty mist irrigation system consisting of fin mist/ fogging nozzles, heavy duty pump of required pressure/ discharge, PVC tank of 500 lt. capacity, screen filter, control valves complete with all necessary fitting etc. along with a suitable timer having capacity to maintain 90 % humidity in the mist chamber.
- **Door:** Two (2) nos. door of size 1.00 m x 2.00 m (width x height) made up of square aluminum profiles and covered with 50% agro shade net fixed by using specially designed profile and spring.
- **Electric Fitting/ Control Panel:** Consisting of copper wire and ISI mark switches, MCB etc. complete as per requirements. Digital/ microprocessor based controller to automatically regulate temperature & humidity. Two normal tube lights along with photoperiodic light controller.
- **Root Trainer Benches/ Stands:** MS angle iron benches or root trainer stand to hold and support root trainers. To ensure high floor area utilization, preferably the mist chamber be provided with movable root trainer benches/stands with suitable support and guide rails.
- **Root trainer:** The mist chamber be provided with Root trainer blocks consisting of twenty (20) cells each having volume of 150 cc having following detailed dimensions/ specifications:
 - Top inside dia.: 50 mm
 - Bottom dia: 20 mm
 - Taper: At 15 mm from bottom
 - Inside dia. at taper: 42 mm
 - Length: 100 mm
 - Ridge: 6 nos. equidistance

- Outer rim at top: 3.2 mm
 - Thickness: At-least 2 mm
 - Colour: Black (Ultra-violet Resistant)
 - Materials: Injection Grade Virgin PPL
 - Volume: 150 cc
 - Weight: At-least 600 gm with accuracy of not less than +-10 gm
 - Total size of block: 295 mm x 235 mm
 - Shapes & cavity: Block Type 20 Holes (5x 4)
- **Curtain wall:** 23 cm wide 45 cm above ground level, 45 cm below ground level duly plastered and painted (with weather proof exterior wall paint) curtain wall provided on all sides of the agronet shade house.
 - **Flooring:** 40 mm thick 1:2:4 (1-cement: 2-sand, 4- stone aggregates) cement concrete anti slippery floor laid over 75 mm thick 1:4:8 (1-cement: 4-sand: 8- stone aggregates) cement concrete base with proper drainage slops.
 - **Foundation:** Grouting of vertical posts in 1:3:6 (1-cement: 3- sand: 6- stone aggregates) cement concrete blocks of 30 cm x 30 cm x 75 cm size below ground level.
 - **Plinth Protection:** 45 cm wide, 35 mm thick 1:3:6 (1-cement: 3-sand: 6- stone aggregates) cement concrete layer laid over 75 mm thick 1:4:8 (1-cement: 4-sand: 8- stone aggregates) cement concrete base with proper drainage slopes.
 - **Standby/ Spare Components:** To ensure uninterrupted operation even during breakdown of individual component each pump shall be provided with standby pump of similar rating along with necessary piping, fittings and instant switchover fittings/ valves. Similarly, quantity as indicated below for the components having the specifications similar to the corresponding components fitted in the agronet shade house shall be provided as spare in the loose form to ensure quick replacement during breakdown of any component:

Component	Spare Quantity
Fogging/ mist irrigation nozzles in mist irrigation system	Ten percent (10 %) of the number of nozzles fitted in the mist chamber
Filter fitted in mist irrigation system	One (1) number

- **Training & After Sales Service:** The tenderer shall depute a suitable technical person for at-least thirty (30) working days to impart hands on training to at-least five field functionaries of the department on operation of the germination chamber.

4.2 Specification of Agronet Shade House Proposed to Be Constructed by the Tenderer

4.2.1 Specification of the Agronet Shade House Proposed to be Constructed by the Tenderer as Option-1 Agronet Shade House *(pl. strike out para 4.2.1.1. to para 4.2.1.11 if the tenderer does not wish to quote the rates)*

4.2.1.1. Summary of Difference between the Desired Specification Indicated in Para 4.1 above and specifications of the Mist Chamber Proposed to be Constructed by the Tenderer:

Component	Desired Specification	Specification of the component proposed to be provided

(attach additional sheet(s), if required)

4.2.1.2 Make, Model, Rating/important feature of Important components and Materials To be Utilized for Construction of Mist Chamber

Components	Make	Model	Size/ Capacity/ Rating/ important features
Agronet			
GI pipes utilized in super-structure			
Nozzles in mist irrigation system			

Components	Make	Model	Size/ Capacity/ Rating/ important features
Water circulation pump in mist irrigation system			
Filter in mist irrigation system			
Control valve in mist irrigation system			
Feeder pipe in mist irrigation system			
Distribution pipe in mist irrigation system			
Storage tank in mist irrigation system			
Switches in electrical system			
Circuit breakers in electrical system			
Electrical panels			

4.2.1.3 To the scale drawing/ layout plan indicating location & size of each structural component (pillars, span) as well as add on features/ fixtures enclosed (yes/ no):

- 4.2.1.4 Detailed layout plan of the mist irrigation system indicating size, rating, location, make and model of each functional component (fogging nozzles, feeder pipe, distribution pipe, pump, filter, control valves, storage tank etc.) enclosed (yes/ no):
- 4.2.1.5 Detailed layout plan of the electrical system indicating size, rating, location, make and model of each functional component (wire, switch, control panel, circuit breaker etc.) enclosed (yes/ no):
- 4.2.1.6 Sample of agronet (4 samples of size 30 cm x 30 cm) and root trainer block to be utilized for construction of mist chamber enclosed (yes/ no):
- 4.2.1.7 Optimum plant placement layout plan along with specifications and drawings of appropriate root trainer stands/benches along with support structures, fitting, fixtures etc. enclosed (yes/ no.)
- 4.2.1.8 Estimated per batch plant holding capacity (no. of plants):
- 4.2.1.9 Estimated weight of GI square pipes utilized for fabrication of superstructure: kg

Note: In case actual weight of GI square pipes utilized for fabrication of superstructure is less than the above indicated estimated weight an amount @ Rs. 100 for every kg of shortfall will be deducted from the passed bill of the tenderer.

- 4.2.1.10 Estimated weight of root trainer stands/ benches along with support structures, fitting, fixtures etc. : Kg

Note: In case actual weight of root trainer stand/ benches along with support structures, fitting, fixtures etc. is less than the above indicated estimated weight an amount @ Rs. 75 for every kg of shortfall will be deducted from the passed bill of the tenderer.

- 4.2.1.11 Name of components (agronet, heat convactor, nozzle, evaporative cooling system fan, pumps etc.) to be utilized for construction of mist chamber for which brochure containing detailed specifications has been enclosed;

- (i)
- (ii)
- (iii)
- (iv)
- (v)
- (vi)

Signature & seal of the Tenderer or his Authorized Signatory

Date:

Components	Make	Model	Size/ Capacity/ Rating/ important features
Water circulation pump in mist irrigation system			
Filter in mist irrigation system			
Control valve in mist irrigation system			
Feeder pipe in mist irrigation system			
Distribution pipe in mist irrigation system			
Storage tank in mist irrigation system			
Switches in electrical system			
Circuit breakers in electrical system			
Electrical panels			

- 4.2.2.3 To the scale drawing/ layout plan indicating location & size of each structural component (pillars, span) as well as add on features/ fixtures enclosed (yes/ no):
- 4.2.2.4 Detailed layout plan of the mist irrigation system indicating size, rating, location, make and model of each functional component (fogging nozzles, feeder pipe, distribution pipe, pump, filter, control valves, storage tank etc.) enclosed (yes/ no):
- 4.2.2.5 Detailed layout plan of the electrical system indicating size, rating, location, make and model of each functional component (wire, switch, control panel, circuit breaker etc.) enclosed (yes/ no):

4.2.2.6 Sample of agronet (4 samples of size 30 cm x 30 cm) and root trainer blocks (two samples) to be utilized for construction of mist chamber enclosed (yes/ no):

4.2.2.7 Optimum plant placement layout plan along with specifications and drawings of appropriate root trainer stands/benches along with support structures, fitting, fixtures etc. enclosed (yes/ no.)

4.2.2.8 Estimated per batch plant holding capacity (no. of plants):

4.2.2.9 Estimated weight of GI square pipes utilized for fabrication of superstructure: kg

Note: In case actual weight of GI square pipes utilized for fabrication of superstructure is less than the above indicated estimated weight an amount @ Rs. 100 for every kg of shortfall will be deducted from the passed bill of the tenderer.

4.2.2.10 Estimated weight of root trainer stands/ benches along with support structures, fitting, fixtures etc. : Kg

Note: In case actual weight of root trainer stand/ benches along with support structures, fitting, fixtures etc. is less than the above indicated estimated weight an amount @ Rs. 75 for every kg of shortfall will be deducted from the passed bill of the tenderer.

4.2.2.11 Name of component (agronet, nozzle, pumps etc.) to be utilized for construction of mist chamber for which brochure containing detailed specifications has been enclosed:

- (i)
- (ii)
- (iii)
- (iv)
- (v)
- (vi)
- (vii)
- (viii)

Signature & seal of the Tenderer or his Authorized Signatory
Date:

Components	Make	Model	Size/ Capacity/ Rating/ important features
Water circulation pump in mist irrigation system			
Filter in mist irrigation system			
Control valve in mist irrigation system			
Feeder pipe in mist irrigation system			
Distribution pipe in mist irrigation system			
Storage tank in mist irrigation system			
Switches in electrical system			
Circuit breakers in electrical system			
Electrical panels			

- 4.2.3.3 To the scale drawing/ layout plan indicating location & size of each structural component (pillars, span) as well as add on features/ fixtures enclosed (yes/ no):
.....
- 4.2.3.4 Detailed layout plan of the mist irrigation system indicating size, rating, location, make and model of each functional component (fogging nozzles, feeder pipe, distribution pipe, pump, filter, control valves, storage tank etc.) enclosed (yes/ no):
- 4.2.3.5 Detailed layout plan of the electrical system indicating size, rating, location, make and model of each functional component (wire, switch, control panel, circuit breaker etc.) enclosed (yes/ no):

4.2.3.6 Sample of agronet (4 samples of size 30 cm x 30 cm) and root trainer blocks (two samples) to be utilized for construction of mist chamber enclosed (yes/ no):

4.2.3.7 Optimum plant placement layout plan along with specifications and drawings of appropriate root trainer stands/benches along with support structures, fitting, fixtures etc. enclosed (yes/ no.)

4.2.3.8 Estimated per batch plant holding capacity (no. of plants):

4.2.3.9 Estimated weight of GI square pipes utilized for fabrication of superstructure: kg

Note: In case actual weight of GI square pipes utilized for fabrication of superstructure is less than the above indicated estimated weight an amount @ Rs. 100 for every kg of shortfall will be deducted from the passed bill of the tenderer.

4.2.3.10 Estimated weight of root trainer stands/ benches along with support structures, fitting, fixtures etc. : Kg

Note: In case actual weight of root trainer stand/ benches along with support structures, fitting, fixtures etc. is less than the above indicated estimated weight an amount @ Rs. 75 for every kg of shortfall will be deducted from the passed bill of the tenderer.

4.2.3.11 Name of component (agronet, nozzle, pumps etc.) to be utilized for construction of mist chamber for which brochure containing detailed specifications has been enclosed:

- (i)
- (ii)
- (iii)
- (iv)
- (v)
- (vi)
- (vii)
- (viii)

Signature & seal of the Tenderer or his Authorized Signatory
Date:

PART- B –PRICE BID

To,
The Principal Chief Conservator of Forests,
Sylvan House, Lower Lachumiere,
Shillong 793 001, Meghalaya

Sub.: Tender for construction of mist chambers, poly houses and agronet shed houses (including irrigation and electrical network *etc.* complete) at mini botanical garden cum planting stock production centres at Umdiker and Williamnagar.

I hereby submit my rates (financial bid) for the construction of mist chambers, poly houses and agronet shed houses (including irrigation and electrical network *etc.* complete) at mini botanical garden cum planting stock production centres at Umdiker and Williamnagar as below:

1. Full name of the Tenderer (in block letters):
2. Postal Address of the Tenderer:
-
-
-
-
-

Phone: Fax: E-mail:

3. Status of the Tenderer (*pl. tick mark appropriately*): Individual/ Partnership Firm/ Co-operative Society/ Joint Stock Company
4. In case of the tenderer being other than individuals, status of the person who sign the tender:.....

Sl. No.	Nature and location of Structure	No. of structures	Specification Option	Plinth area of each structure	Estimated weight (in kg) of support structure per structure*	Rates (in rupees) quoted by the Tenderer					
						Basic rate per sqm plinth area	Tax(es) per sqm plinth area	Other Charges, if any, per sqm plinth area	Total rate per sqm plinth area	Total rate per structure	Total Amt. for required number of structures
1	2	3	4	5	6	7	8	9	10	11	12
4	Mist Chamber at Williamnagar	2	Option-1								
			Option-2								
			Option-3								
5	Poly House at Umdiker	2	Option-1								
			Option-2								
			Option-3								
6	Poly House at Williamnagar	2	Option-1								
			Option-2								
			Option-3								

Sl. No.	Nature and location of Structure	No. of structures	Specification Option	Plinth area of each structure	Estimated weight (in kg) of support structure per structure*	Rates (in rupees) quoted by the Tenderer					
						Basic rate per sqm plinth area	Tax(es) per sqm plinth area	Other Charges, if any, per sqm plinth area	Total rate per sqm plinth area	Total rate per structure	Total Amt. for required number of structures
1	2	3	4	5	6	7	8	9	10	11	12
7	Agronet shade house at Umdiker	3	Option-1								
			Option-2								
			Option-3								
8	Agronet shade house at Williamnagar	3	Option-1								
			Option-2								
			Option-3								

(*: in case actual weight of support structure is less than the estimated weight indicated in col. 6 above amount payable to contractor will proportionately be reduced)

Sl. No.	Nature and location of Structure	No. of structures	Specification Option	Plinth area of each structure	Estimated weight (in kg) per structure*	Rates (in rupees) quoted by the Tenderer					
						Basic rate per sqm plinth area	Tax(es) per sqm plinth area	Other Charges, if any, per sqm plinth area	Total rate per sqm plinth area	Total rate per structure	Total Amt. for required number of structures
1	2	3	4	5	6	7	8	9	10	11	12
5	Poly House at Umdiker	2	Option-1								
			Option-2								
			Option-3								
6	Poly House at Williamnagar	2	Option-1								
			Option-2								
			Option-3								
7	Agronet shade house at Umdiker	3	Option-1								
			Option-2								
			Option-3								
8	Agronet shade house at Williamnagar	3	Option-1								
			Option-2								
			Option-3								

(*: in case actual weight of support structure is less than the estimated weight indicated in col. 6 above amount payable to contractor will proportionately be reduced)

Sl. No.	Nature of Store and place of its supply	Qty Required	Specification Option	Make	Model	Estimated weight (in kg) per Block/ Tray*	Rates (in rupees) quoted by the Tenderer				
							Basic rate Block/ Tray*	Tax(es) per Block/ Tray*	Other Charges, if any, Block/ Tray*	Total rate per Block/ Tray*	Total Amt. for required number of Blocks/ Trays*
1	2	3	4	5	6	7	8	9	10	11	12
4	Germination Tray at Williamnagar	200	Option-1								
			Option-2								
			Option-3								

(*: in case actual weight of root trainer/ germination tray is less than the estimated weight indicated in col. 6 above amount payable to contractor will proportionately be reduced)

Signature & seal of the Tenderer or his Authorized Signatory

Date:

DECLARATION FORM

"I agree that I will not withdraw from the tender offered by me during the time that will be required for its acceptance, nor will I withdraw it afterwards should my tender be accepted. If I withdraw the tender then the entire amount of Earnest Money Deposit (EMD) furnished by me along with this tender will be forfeited in favour of the Government of Meghalaya.

Signature & seal of the Tenderer or his Authorized Signatory

Date: