Office of the Chief Engineer
WATER RESOURCES DEPARTMENT
ASSAM WATER CENTRE
5th Floor, Basistha Chariali, Ghy. - 29

মুখ্য অভিযন্তাৰ কাৰ্য্যালয়
জলসম্পদ বিভাগ
অসম জল কেন্দ্ৰ
৫ম মহলা, বশিষ্ঠ চাৰিআলি, গুৱাহাটী – ২৯

No.: - CE/CC/WR/NIQ/2021-22/1030/08 ***Dated: - Guwahati the 9th May 2022***

To,

The Director
Information and Public Relations
Dispur Last Gate
Guwahti-6

Sub: - Notice Inviting Quotation

Sir

I have the honour to request you to publish the attached Notice Inviting Quotation in 3 *(Three)* {(1*(One)* Assamese, 1 *(One)*, Bengali *(Especially for Barak Valley Region)*, 1 *(One)* English} local daily wide circulated newspaper in two subsequent issue.

Enclo: - As stated above.

Yours faithfully

Director Design
Water Resources Department
Assam Water Centre
5th Floor, Basistha Chariali, Ghy. - 29

Memo no.: - CE/CC/WR/NIQ/2021-22/1030/08 ***Dated: - Guwahati the 9th May 2022***

Copy forwarded to:

1. The Director of Information and Public Relation, Dispur, Guwahati- 6 for publication of the Press Notice in three widely Circulated daily newspapers one in Assamese one in English and one in Bengali (specially for Barak Valley) on or before **12/05/2022.**
2. The Secretary to the Govt. of Assam, Water Resources Department, Dispur, Guwahati-6 for favour of kind information.
3. All Additional Chief Engineer, W.R. Department for information and wide circulation.
4. All Superintending Engineer, W.R. Department for information and wide circulation.
5. All Executive Engineer. W.R. Department information and wide circulation.

Director Design
Water Resources Department
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মুখ্য অভিযন্তাৰ কাৰ্য্যালয়
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No.: - CE/CC/WR/NIQ/2021-22/1030/08 *Dated: - Guwahati the 9th May 2022*

NOTICE INVITING QUOTATION

Sealed quotation affixing court fee stamp of Rs.8.25 *(Rupees Eight and Twenty Five paise)* only is hereby invited from the authorized Manufacturers/ Authorized dealers/ Suppliers for fixation of rates for supply of Geo Textile items/ Galvanized wire netting sheet/ Hexagonal wire netting roll/PVC coated wire netting box & Sewing Thread Yarn PPMF Stitching Thread etc. as detailed in the schedule enclosed and will be received by the undersigned up to 2:00 pm of **20/05/2022** at his office. The quotation will be opened at 2:30 pm on the same date and place. If the last day of receiving of quotation happens to be an unscheduled holiday/ bandha, the next working day will be considered as the date of receiving quotation.

Detailed quotation papers may be obtained from the official website **https://waterresources.assam.gov.in/**

The quotationers or their authorized agents may present at the time of opening of quotation, if they desire so.

Special terms and conditions are given below:

1. The quotation is invited for fixation of estimated rates only.
2. No work shall be allotted against this quotation.
3. Manufacturers submitting quotation should submit proof regarding incorporation of their organization and manufacturing facilities.
4. Other Agencies / Dealers should submit proof regarding authorized dealership of any manufacturer along with the proof regarding incorporation of the manufacturer and manufacturing facilities.
5. Rates should be quoted inclusive of all taxes as applicable.
6. Rates should be quoted For Guwahati.
7. Any correction of quoted rates should bear dated initial of the quotationer.
8. No quotation shall be received via e-mail.
9. Quotation may be submitted by speed post/Courier service, but it should reach the office of the undersigned within the stipulated date and time.
10. Bidder may submit Quotation in hardcopy as well as via email also if choose to, email id ***eoicewrd@gmail.com***

Sd/-
Director Design
Water Resources Department
Assam Water Centre
5th Floor, Basistha Chariali, Ghy. – 29

SCHEDULE

Item no.	***Item***	***Unit***	***Rate Excluding Tax in Rs.***	***Rate Including tax in Rs. (tax calculation is to be detailed)***
1	Supply of Geo - textile bags of type - A (1.03 × 0.70M) inner to inner made of Geo - textile non - woven fabric sheets of 400 GSM manufactured from 100% virgin Polypropylene (PP) fiber with minimum properties as per IS 16653:2017 i) Wide Tensile strength (MD) ≥ 20 KN/m & Wide Tensile strength (CD) ≥20 KN/m ii) Elongation (MD) ≥ 50% & Elongation (CD) ≥ 50% iii) Abrasion ≥ 95% iv) Trapezoidal Tear Strength (MD) ≥ 450 N & Trapezoidal Tear Strength (CD) ≥ 450 N v) CBR Puncture strength ≥ 4,000 N vi) Permittivity ≥ 1.10 s – 1 vii) Permeability ≥ 40 l/m^2/sec viii) AOS ≤ 75 micron ix) UV Resistance @ 500 hours retained Tensile strength (MD) & (CD) ≥ 80% x) Mass ≥ 400 gm/m^2 xi) Thickness at 2 KPa ≥ 3 mm xii) Seam strength ≥ 80 % of actual fabric strength. Stitching of Bags should be Ring Spun Yarn stitches with 2,500 – 3,000 denier double line chain stitch with overlap with stitches along the edge @ minimum 15 stitches per 100 mm. (Bags are to be supplied of 100 numbers in a bundle, properly packed with each bag having proper tag with name of Manufacturer, Batch Number, the GSM and type of polymer encrypted and stitched on top corner and each bag is to be marked with "WRD, Govt. of ASSAM" to be printed distinctly. Test Certificate from approved NABL accredited and ISO Certified Laboratory should invariably be submitted against each batch of material).	Each		
2	Supply of Geo - textile bags of type - A (1.03 × 0.70M) inner to inner made of Geo - textile non- woven fabric sheets of 300 GSM manufactured from 100% virgin Polypropylene (PP) fiber with minimum properties as per IS 16653:2017 i) Wide Tensile strength (MD) ≥ 15 KN/m & Wide Tensile strength (CD) ≥ 15 KN/m ii) Elongation (MD) ≥ 50% & Elongation (CD) ≥ 50% iii) Abrasion ≥ 95% iv) Trapezoidal Tear Strength (MD) ≥ 340 N & Trapezoidal Tear Strength (CD) ≥ 340 N v) CBR Puncture strength ≥ 3,000 N	Each		

Signature of Authorized person/
Quotationer

Item no.	***Item***	***Unit***	***Rate Excluding Tax in Rs.***	***Rate Including tax in Rs. (tax calculation is to be detailed)***
	vi) Permittivity ≥ 1.25 s – 1 vii) Permeability ≥ 60 l/m^2/sec viii) AOS ≤ 75 micron ix) UV Resistance @ 500 hours retained Tensile strength (MD) & (CD) ≥ 80% x) Mass ≥ 300 gm/m² xi) Thickness at 2 KPa ≥ 3 mm xii) Seam strength ≥ 80 % of actual fabric strength. Stitching of Bags should be Ring Spun Yarn stitches with 2,500 – 3,000 denier double line chain stitch with overlap with stitches along the edge @ minimum 15 stitches per 100 mm. (Bags are to be supplied of 100 numbers in a bundle, properly packed with each bag having proper tag with name of Manufacturer, Batch Number, the GSM and type of polymer encrypted and stitched on top corner and each bag is to be marked with "WRD Govt. of ASSAM" to be printed distinctly. Test Certificate from approved NABL accredited and ISO Certified Laboratory should invariably be submitted against each batch of material).			
3	Supply of Geo Bags Type - B (Size 2.00m × 1.50m inner to inner) made of composite layers of Polypropylene (PP) fiber as per IS 16653:2017 for Nonwoven and IS 16654:2017 for Woven: ***Woven Geo-textile for the outer cover (300gsm):*** The woven geo textile is woven with multifilament woven fabric manufactured from ultra violet stabilized polypropylene. Geo - textile used to manufacture geo - textile bags should have high mechanical properties for enhanced durability along with enhanced puncture, abrasion and U.V. resistance characteristics. Geo - textile should be inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids. ***Properties***: i) Tensile strength (MD) ≥ 80 KN/m & Tensile strength (CD) ≥ 70 KN/m ii) Elongation (MD) ≤ 25% & Elongation (CD) ≤ 25% iii) Abrasion ≥ 75% iv) Trapezoidal Tear Strength (MD) ≥ 1,500N & Trapezoidal Tear Strength (CD) ≥ 1,300N v) CBR Puncture strength ≥ 900N vi) Permittivity ≥ 1.25 s – 1 vii) Permeability ≥ 18 l/m^2/sec viii) AOS ≤ 250 micron ix) UV Resistance @ 500 hours retained Tensile strength (MD) & (CD) ≥ 80% x) Mass ≥ 300 gm/m² xi) Seam strength ≥ 50 % of actual fabric	Each		

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Quotationer

Item no.	***Item***	***Unit***	***Rate Excluding Tax in Rs.***	***Rate Including tax in Rs. (tax calculation is to be detailed)***
	strength. ***Non - Woven Geo - textile for the inner layer (300gsm):*** It is needle punched non - woven geo - textile made of 100% polypropylene staple fibers which are formed into a random network for dimensional stability. It should resist UV degradation, rotting and alkalis. ***Properties:*** i) Wide Tensile strength (MD) ≥ 15 KN/m & Wide Tensile strength (CD) ≥ 15 KN/m ii) Elongation (MD) ≥ 50% & Elongation (CD) ≥ 50% iii) Abrasion ≥ 95% iv) Trapezoidal Tear Strength (MD) ≥ 340 N & Trapezoidal Tear Strength (CD) ≥ 340 N v) CBR Puncture strength ≥ 3,000 N vi) Permittivity ≥ 1.25 s – 1 vii) Permeability ≥ 60 l/m^2/sec viii) AOS ≤ 75 micron ix) UV Resistance @ 500 hours retained Tensile strength (MD) & (CD) ≥ 80% x) Mass ≥ 300 gm/m^2 xi) Thickness at 2 KPa ≥ 3 mm xii) Seam strength ≥ 80 % of actual fabric strength. Stitching of Bags should be Ring Spun Yarn stitches with 2,500 – 3,000 denier double line chain stitch with overlap with stitches along the edge. (Bags are to be supplied of 15 numbers in a bundle, properly packed with each bag having proper tag with name of Manufacturer, Batch Number, the GSM and type of polymer encrypted and stitched from approved NABL accredited and ISO Certified Laboratory should invariably be submitted against each batch of material).			
4	Supply of Geo-textile Bags (Pillow Type) of Size 1.20m × 1.00m, inner dimension made of composite layers of geo-textile as per specifications below: Woven Geo-textile for the outer cover. The woven geo textile is woven with UV resistant slit film tape fibre with MAVR values of the following properties. Geo-textile used to manufacture geo-textile bags should have high mechanical properties for enhanced durability along with enhanced puncture, abrasion and U.V. resistance characteristics. Geo-textile should be inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids. 1) Weight (ISO-9864/ASTMD 5261) ≥ 250 Gms/Sqm. 2) Tensile strength (MD) (ASTMD 4595) ≥ 35 kN/m	Each		

Signature of Authorized person/
Quotationer

Item no.	***Item***	***Unit***	***Rate Excluding Tax in Rs.***	***Rate Including tax in Rs. (tax calculation is to be detailed)***
	3) Tensile strength (CD) (ASTMD 4595) ≥ 35 kN/m 4) Tensile Elongation (ASTMD 4595) ≥ 5% & ≤ 30% 5) Grab Elongation (ASTMD 4632) ≥ 5% & ≤ 30% 6) Tensile strength (ASTMD 4632) = 1.5 KN 7) UV resistance (ASTMD 4355) = 70%/500 hrs Non - woven Geo - textile for the inner layer. It is needle punched non - woven geo-textile made of 100% polypropylene staple fibers which are formed into a random network for dimensional stability. It should resist UV degradation, rotting and alkalis. 1) Weight (ISO-9864/ASTMD 5261) ≥ 300 Gms/Sqm. 2) Tensile strength (MD) (ASTMD 4595) ≥ 12 kN/m 3) Tensile strength (CD) (ASTMD 4595) ≥ 12 kN/m 4) Tensile Elongation (ASTMD 4595) ≥ 5% & ≤ 30% 5) Grab Elongation (ASTMD 4632) ≥ 5% & ≤ 30% 6) Tensile strength (ASTMD 4632) = 1.5 KN 7) UV resistance (ASTMD 4355) = 70%/500 hrs (Bags are to be supplied of 100 numbers or part in a bundle, properly packed with name of Manufacturer and Batch Number is to be marked on each bag with "WRD Govt. of ASSAM" to be printed on each bag and mentioning properly the GSM and type of Geo bag polymer. Test Certificate from approved NABL accredited and ISO Certified Laboratory should invariably be submitted against each batch of material)			
5	Supply of non - woven Geo - textile fabric sheets of 300 GSM manufactured from 100% virgin Polypropylene (PP) fiber with minimum properties as per IS 16653:2017 i) Wide Tensile strength (MD) ≥ 15 KN/m & Wide Tensile strength (CD) ≥ 15 KN/m ii) Elongation (MD) ≥ 50% & Elongation (CD) ≥ 50% iii) Abrasion ≥ 95% iv) Trapezoidal Tear Strength (MD) ≥ 340 N & Trapezoidal Tear Strength (CD) ≥ 340 N v) CBR Puncture strength ≥ 3,000 N vi) Permittivity ≥ 1.25 s – 1 vii) Permeability ≥ 60 l/m^2/sec viii) AOS ≤ 75 micron ix) UV Resistance @ 500 hours retained Tensile strength (MD) & (CD) ≥ 80% x) Mass ≥ 300 gm/m^2	Sqm		

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Item no.	***Item***	***Unit***	***Rate Excluding Tax in Rs.***	***Rate Including tax in Rs. (tax calculation is to be detailed)***
	xi) Thickness at 2 KPa ≥ 3 mm. (Each Roll of Geo Fabric Sheet should be supplied in properly packed Bundles and should be marked with the Name of Manufacturer, Batch Number & its dimensions clearly on each roll with "WRD Govt. of ASSAM" to be printed on it and mentioning properly the GSM and type of polymer and Test Certificate from approved NABL accredited and ISO Certified Laboratory should invariably be submitted against each batch of material).			
6	Supply of G - Mat in double layered composite Geo - textile fabricated to form a three dimensional mattresses, the upper layer of the mattress being heavily woven with polypropylene fabric needle - punched with a mixture of U.V. stabilized green fibers and cut tape yarns with ***Upper Layer Properties as:*** 1) Mass per unit area > 650 GSM, 2) Tensile Strength (MD) ≥ 70kN/m, 3) Tensile Strength (CD) ≥ 70kN/m 4) Tensile Elongation (MD) ≤ 25%, 5) Tensile Elongation (CD) ≤ 25%, 6) Pore Size < 0.35mm, 7) Abrasion Resistance ≥ 35 %, 8) UV @ 500 hours ≥ 90% 9) Resistance to Oxidation @ 100°C for 28 days) ≥ 80% ***&*** ***Lower Layer Properties as*** 1) Mass per unit area > 400 GSM, 2) Tensile Strength (MD) ≥ 110kN/m, 3) Tensile Strength (CD) ≥ 90kN/m, 4) Tensile Elongation (MD) ≤ 25%, 5) Tensile Elongation (CD) ≤ 25%, 6) Pore Size < 0.35mm, 7) Abrasion Resistance ≥ 60 %, 8) UV @ 500 hours ≥ 90%, 9) Resistance to Oxidation @ 100°C for 28 days) ≥ 80%. The sewing thread should be of high tenacity polyester and parallel stitches are to be continued positioned at 350 mm apart with a stitch length not exceeding 5 mm. (Each roll of G-Mat should be supplied in properly packed bundle and should be marked with the Name of Manufacturer & Batch Number & its dimensions clearly on each roll with "WRD Govt. of ASSAM" to be printed on it and mentioning properly the GSM (for both upper and lower layer) and types of polymer (for both upper and lower layer) and Test Certificate from approved NABL accredited and ISO Certified Laboratory should invariably be submitted against each batch of material) ***(Inclusive of Custom Duty)***	Sqm		
7	Supply of G - Mat in double layered	Sqm		

Signature of Authorized person/
Quotationer

Item no.	***Item***	***Unit***	***Rate Excluding Tax in Rs.***	***Rate Including tax in Rs. (tax calculation is to be detailed)***
	composite Geo - textile fabricated to form a three dimensional mattresses, the upper layer of the mattress being heavily woven with polypropylene fabric needle - punched with a mixture of U.V. stabilized green fibers and cut tape yarns with ***Upper Layer Properties as:*** 1) Mass per unit area > 650 GSM, 2) Tensile Strength (MD) ≥ 70kN/m, 3) Tensile Strength (CD) ≥ 70kN/m 4) Tensile Elongation (MD) ≤ 25%, 5) Tensile Elongation (CD) ≤ 25%, 6) Pore Size < 0.35mm, 7) Abrasion Resistance ≥ 35 %, 8) UV @ 500 hours ≥ 90% 9) Resistance to Oxidation @ 100°C for 28 days) ≥ 80% ***&*** ***Lower Layer Properties as*** 1) Mass per unit area > 400 GSM, 2) Tensile Strength (MD) ≥ 110kN/m, 3) Tensile Strength (CD) ≥ 90kN/m, 4) Tensile Elongation (MD) ≤ 25%, 5) Tensile Elongation (CD) ≤ 25%, 6) Pore Size < 0.35mm, 7) Abrasion Resistance ≥ 60 %, 8) UV @ 500 hours ≥ 90%, 9) Resistance to Oxidation @ 100°C for 28 days) ≥ 80%. The sewing thread should be of high tenacity polyester and parallel stitches are to be continued positioned at 350 mm apart with a stitch length not exceeding 5 mm. (Each roll of G-Mat should be supplied in properly packed bundle and should be marked with the Name of Manufacturer & Batch Number & its dimensions clearly on each roll with "WRD Govt. of ASSAM" to be printed on it and mentioning properly the GSM (for both upper and lower layer) and types of polymer (for both upper and lower layer) and Test Certificate from approved NABL accredited and ISO Certified Laboratory should invariably be submitted against each batch of material) ***(Without Custom duty)***			
8	Supply of geo - textile Tube (Mega containers) of fill height of 2.5m and 25m length made of geo - textile with minimum properties as mentioned below: i) Tensile strength of geo - textile materials > 200KN/m in both directions for woven geo - textiles ii) O95 (pore size) of the geo - textile materials < 180 microns. iii) Seam strength > 70% of the material tensile strength. iv) Elongation of the material at the ultimate tensile strength should not be more than 20% v) CBR Brust Strength > 10.5	Each		

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Item no.	***Item***	***Unit***	***Rate Excluding Tax in Rs.***	***Rate Including tax in Rs. (tax calculation is to be detailed)***
	vi) Abrasion resistance (BAW Rotating Drum) > 75% of strength retained. vii) UV Resistance (ASTMD 4355 - 500Hrs) > 80% of strength retained. The geo-textile mega containers must resist the pressure created by stacking the tubes in 3:2:1 manner.			
9	Supply of woven Geo - textile Tube (Mega containers) of filled height 0.9m made of geo - textile with minimum properties as mentioned below: i) Tensile strength of geo - textile materials > 65KN/m in both directions ii) O95 (Pore size) of the geo - textile materials < 180 microns, iii) Seam strength > 70% of the materials tensile strength, iv) Elongation of the material at the ultimate tensile strength should not be 65% for v) CBR Brust strength > 10.5, vi) Abrasion resistance (BAW Rotating Drum) > 75% of strength retained, vii) UV Resistance (ASTMD 4,355 - 500 Hrs) > 80% of strength retained. (Including all taxes) ***(a) 10m Length***	Each		
10	Supply of geo-textile Tube (Mega containers) with minimum properties as mentioned below: • Polymer = PP • Tube Circumference= 4.3 / 8.6 / 12.9 / 14.2 / 16 / 17.2 / 21.6 + 5% (m) • Fill Port (diameter) = 30 to 45 CM • Tensile Strength (MD) ≥ 175 KN/m • Tensile Strength (CD) ≥ 175 KN/m • Elongation – MD ≤ 25% • AOS ≤ 0.180 mm • Permittivity ≥ 0.40 S-1 Length =10/15/20/25/30 m			
10.1. 10.1.a	***Tube Circumference = 4.3 (m)*** Length = 10m	Each		
10.1.b	Length = 15m	Each		
10.1.c	Length = 20m	Each		
10.1.d	Length = 25m	Each		
10.1.e	Length = 30m	Each		
10.2. 10.2.a	***Tube Circumference = 8.6 (m)*** Length = 10m	Each		
10.2.b	Length = 15m	Each		
10.2.c	Length = 20m	Each		
10.2.d	Length = 25m	Each		
10.2.e	Length = 30m	Each		
10.3. 10.3.a	***Tube Circumference = 12.9 (m)*** Length = 10m	Each		
10.3.b	Length = 15m	Each		
10.3.c	Length = 20m	Each		
10.3.d	Length = 25m	Each		
10.3.e	Length = 30m	Each		

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Item no.	***Item***	***Unit***	***Rate Excluding Tax in Rs.***	***Rate Including tax in Rs. (tax calculation is to be detailed)***
10.4. 10.4.a	***Tube Circumference = 14.2 (m)*** Length = 10m	Each		
10.4.b	Length = 15m	Each		
10.4.c	Length = 20m	Each		
10.4.d	Length = 25m	Each		
10.4.e	Length = 30m	Each		
10.5. 10.5.a	***Tube Circumference = 16.0 (m)*** Length = 10m	Each		
10.5.b	Length = 15m	Each		
10.5.c	Length = 20m	Each		
10.5.d	Length = 25m	Each		
10.5.e	Length = 30m	Each		
11.	Supply of geo-textile Tube (Mega containers) with minimum properties as mentioned below • Polymer = PP • Tube Circumference = 4.3 / 8.6 / 12.9 / 14.2 / 16 / 17.2 / 21.6 + 5% (m) • Fill Port (diameter) = 30 to 45 CM • Tensile Strength (MD) ≥ 100 KN/m • Tensile Strength (CD) ≥ 100 KN/m • Elongation – MD ≤ 25% • AOS ≤ 0.180 mm • Permittivity ≥ 0.40 S-1 Length =10/15/20/25/30 m			
11.1. 11.1.a	***Tube Circumference = 4.3 (m)*** Length = 10m	Each		
11.1.b	Length = 15m	Each		
11.1.c	Length = 20m	Each		
11.1.d	Length = 25m	Each		
11.1.e	Length = 30m	Each		
11.2. 11.2.a	***Tube Circumference = 8.6 (m)*** Length = 10m	Each		
11.2.b	Length = 15m	Each		
11.2.c	Length = 20m	Each		
11.2.d	Length = 25m	Each		
11.2.e	Length = 30m	Each		
11.3. 11.3.a	***Tube Circumference = 12.9 (m)*** Length = 10m	Each		
11.3.b	Length = 15m	Each		
11.3.c	Length = 20m	Each		
11.3.d	Length = 25m	Each		
11.3.e	Length = 30m	Each		
11.4. 11.4.a	***Tube Circumference = 14.2 (m)*** Length = 10m	Each		
11.4.b	Length = 15m	Each		
11.4.c	Length = 20m	Each		
11.4.d	Length = 25m	Each		
11.4.e	Length = 30m	Each		
11.5. 11.5.a	***Tube Circumference = 16.0 (m)*** Length = 10m	Each		
11.5.b	Length = 15m	Each		
11.5.c	Length = 20m	Each		
11.5.d	Length = 25m	Each		
11.5.e	Length = 30m	Each		
12.	Supply of geo-textile Tube (Mega containers) with minimum properties as mentioned below			

Signature of Authorized person/
Quotationer

Item no.	***Item***	***Unit***	***Rate Excluding Tax in Rs.***	***Rate Including tax in Rs. (tax calculation is to be detailed)***
	• Polymer = Polyester • Tube Circumference = 4.3 / 8.6 / 12.9 / 14.2 / 16 / 17.2 / 21.6 + 5% (m) • Fill Port (diameter) = 30 to 45 CM • Tensile Strength (MD) ≥ 175 KN/m • Tensile Strength (CD) ≥ 175 KN/m • Elongation – MD ≤ 15% • AOS ≤ 0 .25mm • Permeability ≥ 3 × 10-3 m/s Length =10 / 15 / 20 / 25 / 30 m			
12.1. 12.1.a	***Tube Circumference = 4.3 (m)*** Length = 10m	Each		
12.1.b	Length = 15m	Each		
12.1.c	Length = 20m	Each		
12.1.d	Length = 25m	Each		
12.1.e	Length = 30m	Each		
12.2. 12.2.a	***Tube Circumference = 8.6 (m)*** Length = 10m	Each		
12.2.b	Length = 15m	Each		
12.2.c	Length = 20m	Each		
12.2.d	Length = 25m	Each		
12.2.e	Length = 30m	Each		
12.3. 12.3.a	***Tube Circumference = 12.9 (m)*** Length = 10m	Each		
12.3.b	Length = 15m	Each		
12.3.c	Length = 20m	Each		
12.3.d	Length = 25m	Each		
12.3.e	Length = 30m	Each		
12.4. 12.4.a	***Tube Circumference = 14.2 (m)*** Length = 10m	Each		
12.4.b	Length = 15m	Each		
12.4.c	Length = 20m	Each		
12.4.d	Length = 25m	Each		
12.4.e	Length = 30m	Each		
12.5. 12.5.a	***Tube Circumference = 16.0 (m)*** Length = 10m	Each		
12.5.b	Length = 15m	Each		
12.5.c	Length = 20m	Each		
12.5.d	Length = 25m	Each		
12.5.e	Length = 30m	Each		
13	Supply of Rope Polypropylene (PP) Gabion of size 2m × 2m × 0.45 m having the following properties i) Mesh opening size150 mm × 150mm ii) Rope Diameter of 9.0mm iii) (iii)Linear Density of rope ≥ 65.1 gm/m iv) Tensile Strength ≥ 1900 kg v) Abrasion Resistance of rope after 1,000 cycles ≥ 65% vi) CBR Puncture Strength ≥ 7,000 kg.	Each		
14	Supply of Sewing Thread/Yarn PPMF Stitching Thread (2000 Den. Kaplon) i/c payment of taxes.	RM		
15	Supply of galvanised wire netting sheets made of 8 G wire mesh of 152 mm square mesh in sheets of overall size 2.57 m × 1.66 m including 76 mm projection of each wire on all sides beyond the net size of 2.42 m x	No.		

Signature of Authorized person/
Quotationer

Item no.	***Item***	***Unit***	***Rate Excluding Tax in Rs.***	***Rate Including tax in Rs. (tax calculation is to be detailed)***
	1.51 m having knot of 12 G, G.I wire at every joint including loading, unloading and stacking properly complete as directed by the Deptt. (Weight of each sheet should not be less than 6.3 kg)			
16	Supply of hexagonal wire netting roll 152 mm mesh made of 8 G. G I wire of size 15.24 m × 3.66 m longitudinal wire at 152 mm centre to centre including loading, unloading and stacking properly complete as directed (weight of each roll should not be less than 83 kg)	Roll		
17	Construction and supply of Wire -netting box of size 1.50 m × 1.50 m × 0.45 m made with mechanically woven, double twisted, hexagonal shaped wire mesh with wire made of low carbon, high ductile MS wire with heavy class of galvanization with an additional layer of PVC coating with mesh type of 10 × 12 as per EN 10223 & ASTM A975, mesh wire of 2.70 mm (I.D) /3.70 mm (OD) tensile strength of 450 - 500/mm^2, edge wire selvedge around it at least 2.5 times, lacing wire (zinc PVC coated) of 2.20mm (I.D) /3.20mm (OD), VC coating thickness of 0.50mm nominal, 0.38 mm minimum, Mesh opening size 150mm × 150mm and with average weight per unit being 12 kg with additional 3% of the weight of box for lacing wire supplied separately, supporting the facing of the box with zinc coated steel wire of required length as directed, complying with ASTM and European norms.	No.		
18	Supply of R.C.C. Porcupine member of size 0.10m × 0.10m × 3.00m with cement concrete proportion 1:2:4, reinforced by 4 nos. of 8mm dia. TMT bar and 4mm dia. (8G) wire stirrups at 15cm C/C with 2 *(Two)* nos. of holes of 20mm dia. at 50 cm inside from both sides in the same face and in the other face of member another 2 *(Two)* nos. of holes of size 20mm dia. at 65 cm inside from both ends including properly curing for 28 days and supply at specified stack yard complete as directed.	Member		
19	Supply of R.C.C. Porcupine member of size 0.10m × 0.10m × 2.00m with cement concrete proportion 1:2:4, reinforced by 4 nos. of 8mm dia. TMT bar and 4mm dia. (8G) wire stirrups at 15cm C/C with 2 *(Two)* nos. of holes of 20mm dia. at 50 cm inside from both sides in the same face and in the other face of member another 2 *(Two)* nos. of holes of size 20mm dia. at 65 cm inside from both ends including properly curing for 28 days and supply at specific stack yard complete as directed.	Member		
20	Supply of Pre stressed Cement Concrete (PSC) Porcupine members of size 0.10m ×	Member		

Signature of Authorized person/
Quotationer

Item no.	***Item***	***Unit***	***Rate Excluding Tax in Rs.***	***Rate Including tax in Rs. (tax calculation is to be detailed)***
	0.10m × 3.00m with M-30 grade of cement concrete conforming to IS 1343:2012 using super-plasticizer @ 1.2 lit/bag of cement with graded broken coarse aggregates up to 20mm size down conforming to IS 10262:2009 & IS 456:2000 and reinforced with 4 *(Four)* nos. of 4 mm dia. high tensile steel wire cable with necessary cover and 4mm high tensile stirrups at 250mm C/C, in conformity with IS-6403:R2002 and stressed to required strength not exceeding 9.18 N/mm, holes of 16 mm dia. at 50 cm inside from both ends in the same face and in either face of post, another 2 *(Two)* nos. of holes of size 16 mm dia. at 65mm inside from both ends including properly curing for 21 *(Twenty one)* days and carriage of porcupine members from factory to the stack yard of Divisional/Sub - Divisional Store within a distance up to 20 Km including loading, unloading & stacking complete as directed. (Including forest royalty and all taxes as admissible)			

Signature of Authorized person/
Quotationer