

**GOVERNMENT OF INDIA  
DEPARTMENT OF SPACE  
LIQUID PROPULSION SYSTEMS CENTRE  
VALIAMALA, TRIVANDRUM 695547, KERALA  
PURCHASE & STORES**

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Date :27/12/2017

**INVITATION TO TENDER**

M/s

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Our Ref No : TP13 2017-030423-01

Tender Due: 16:00 Hrs IST on 29/01/2018

Dear Sirs,

Please submit your sealed quotation , in the Tender Form enclosed here along with the descriptive catalogues / pamphlets /literature ,superscribed with Our Ref.No. and Due Date for the supply of the following items as per the terms & conditions mentioned in Annexure( Form No: DOS:PM:20/DOS:PM)22

S.No.	Description of Items with Specifications	Unit	Quantity
1	Supply, Installation, Commissioning operations and management of IP PBX with Server-Gateway Architecture & hot redundancy server. Specs. as per Annexure-A	LOT	1
2	Supply of CLIP phones as per the Specifications in Annexure B.1	No	300
3	Supply of IP Phones as per the Specifications in Annexure B.2	No	50
4	One Resident engineer for the operations and maintenance of the system for the 3 Year warranty period	No	1

**DELIVERY AT:** VALIAMALA

**MODE OF DESPATCH** ON SITE

**DUTY EXEMPTIONS** EXEMPTED

**SPECIAL INSTRUCTIONS** NIL

**SPECIFIC TERMS** DOS:PM:20/DOS:PM:22

**INSTRUCTIONS TO TENDERERS:**

1. Request For Proposal (RFP) as per Annexure - I.
2. General Terms and conditions as per Annexure - II.
3. Instructions for Two Part Tender as per Annexure - III.
4. Technical Comparison Sheet as per Annexure - IV.
5. Fax/email offers will not be accepted.

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## ANNEXURE -A

**RFP FOR THE SUPPLY, INSTALLATION, COMMISSIONING, OPERATIONS AND MAINTENANCE OF IP-PBX WITH SERVER GATEWAY ARCHITECTURE IN LPSC, VALIAMALA****1.0. SCOPE OF WORK**

The Scope of work includes Supply, Installation, Commissioning, Operations and Maintenance of IP-based Private Branch Exchange (IP-PBX) with Server-Gateway architecture and hot redundant servers in LPSC Valiamala on turnkey basis equipped with 1450 analog extensions and 50 IP phone connectivity from day one. The system shall be capable to meet future augmentation up to of 2000 connections in analog & IP mode. The existing Telephone Exchange and the detailed scope of work are mentioned in the following sections.

The supplier shall carry out the following activities:

**2.1. SUPPLY AND INSTALLATION OF IP-PBX**

- 2.1.1. Supply, Installation and commissioning of IP-based Private Branch Exchange with Server-Gateway Architecture which has to be positioned at LPSC, Valiamala capable of supporting existing 1450 analog telephone connections. The System shall have expandability of up to 2000 Analog/IP connections. The required telecommunication equipment/s shall be supplied and installed in the same Telephone Exchange room in LPSC Valiamala.
- 2.1.2. PRI line interface- minimum 6 Nos., E&M Interface- minimum 2 Nos., minimum 12 Trunk line interface, 50 IP Licenses, Gateway supporting 1450 analog connections, GSM/3G/4G interface and L3/L2 Network Switches has to be supplied
- 2.1.3. Supply & Installation of minimum 2000 port Main Distribution Frames (MDF) supporting both field side and exchange side, Krone modules, Interconnecting cables, Equipment Racks, and all the related equipment/Systems for the Exchange
- 2.1.4. Supply and installation of sufficient numbers of Computers/Laptops for Administration, Operations and Maintenance of the Exchange. (Core is 7<sup>th</sup> Gen, 3.2GHz/8GB, DDR-IV/1TB SATA HDD/NIC/19" LCD Monitor)

- 2.1.5. The system shall be fully modular and fully non-blocking type with distributed architecture. It shall have all the features as mentioned in Section 2.2 & 2.3
- 2.1.6. The IP-PBX must be highly available ensuring an uptime of at least 99.99% as per the Section 2.4
- 2.1.7. Necessary power supply units, FCBC and UPS of sufficient capacity shall be supplied. Power supply and UPS requirements are detailed in Section 2.5
- 2.1.8. Supply & Installation of lightning protection as per Section 2.6
- 2.1.9. Supply, Installation & Configuration of Management & Call billing Software as per Section 2.7
- 2.1.10. Installation, Testing & Commissioning of IP-PBX shall be carried out as per the details in Section 2.8 & 2.9
- 2.1.11. Comprehensive Warranty for 3 years from the date of Commissioning of the facility shall be provided.
- 2.1.12. Comprehensive Annual Maintenance Contract for subsequent 5 years after the warranty period also shall be quoted separately. More details as per Section 2.10

## **2.2. SYSTEM FEATURES**

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- 2.2.1. The system shall be of Server-Gateway architecture with redundancy server with redundant hot swappable power supply
- 2.2.2. The server shall be 19" rack mountable type sufficient to handle the exchange.
- 2.2.3. The Server-Gateway connection shall be on a standard interface like Ethernet
- 2.2.4. The Exchange shall be able to switch simultaneously voice, data and images without any degradation of service quality
- 2.2.5. The system shall automatically changeover to redundancy server in case of failure of primary server without call drop
- 2.2.6. The proposed system shall have Automatic Route Selection (ARS), Least Cost Routing (LCR), Automatic Call Distribution, Unified Communication, Encryption, FAX Support and QoS support
- 2.2.7. Exchange level switching shall be purely IP-based and Media Gateways shall be used for interfacing between with analog devices and sufficient licenses needs to be supplied if required.
- 2.2.8. Media gateway shall be modular with web managing interface, SNMPv1, V3, Telnet, Fax and modem over IP, IP v4/V6 and routing & switching functionalities

- 2.2.9. Sufficient numbers of Layer 3 and Layer 2 Networking devices needs to be supplied.
- 2.2.10. The IP-PBX should be able to integrate with public telecom network infrastructure (PSTN/ISDN/E1), Mobile Network (GSM / 3G/ 4G) and legacy interfaces (like E&M)
- 2.2.11. The system shall support sufficient number of analog extensions, digital extensions, trunk lines, PRI lines and E&M lines
- 2.2.12. The system shall support wide range of terminals including Analog Phone, Digital Phone, IP phones (Hard, Soft & Wireless), SIP Extensions and soft phone including third party phones from day one. All necessary hardware should be provisioned for this from day one.
- 2.2.13. Support for SIP and H.323 Signaling protocols
- 2.2.14. The system shall support IPv4 and IPv6. Documentary evidence from OEM shall be submitted for the same.
- 2.2.15. In case of failure of any external trunk line connectivity, internal telephone communications within LPSC shall not be affected and automatic switch over to the redundant trunk line shall be ensured.
- 2.2.16. All existing phone numbers which are allotted by M/s BSNL shall be retained as such. It shall be the responsibility of the supplier to interact with M/s BSNL and make provision for the same
- 2.2.17. Existing 4-digit Direct Inward Dialing (DID) level has to be retained for Closed User Group (CUG) Calling
- 2.2.18. Hotline facilities through 2 Nos. of E&M and 1 no PRI with other ISRO Centers shall be retained
- 2.2.19. Existing campus-wide telephone network and telephone instruments shall be retained and interconnected to the proposed exchange.
- 2.2.20. System should ensure the compatibility with the existing analog phones available in the centre.
- 2.2.21. Even though the currently proposed Telephone Exchange is centralized architecture, in future there may be necessity for distributed telephone exchange in various locations of Valiamala. The proposed system shall have the flexibility to establish the distributed exchange.
- 2.2.22. In case of distribution of Exchange is necessitated later, Supplier shall carry out all activities related to its Installation & Operations.

2.2.23. The system should adhere communication security standards and approvals in Network, Call sever and management in accordance with the guidelines made by Dept. of Telecommunications & Dept. of Electronics & IT, Govt. of India

### 2.3. TELEPHONY FEATURES

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Following services shall be available:

- 2.3.1. **Voice Mail** application allowing callers to leave messages. It shall have proper methods to alert users about the presence of voice mail and also easy way to listen to those voice mails. Simultaneous usage of minimum 16 ports and minimum 8 Hours of data storage is required. Voice mail to email option and support unified messaging with compliant email applications like Outlook, Domino etc. The System should support voice mail access through web browser and external Fax server integration.
- 2.3.2. **Auto Attendant** shall greet incoming calls, announce service message and interactively assist the external callers to reach their destination easily with distinct message options
- 2.3.3. **Call Forwarding**- To redirect the incoming calls to an extension to another phone.
- 2.3.4. **Call Recording** – Minimum 10 telephone numbers have to be simultaneously recorded with storage for retaining at least one-month data. The numbers/calls to be recorded (including PSTN) shall be selectable and dynamically changeable through software interface with proper authentication.
- 2.3.5. **Automatic Call Transfer**
- 2.3.6. **Consultation Hold**
- 2.3.7. **Call Park**- This allows to put an Ongoing call on hold and then retrieve the same call from any other phone on the system.
- 2.3.8. **Conference Call** – The system shall have minimum 10-party simultaneous voice conferencing in any combination of external and internal parties
- 2.3.9. **STD locking feature**
- 2.3.10. **Caller Line Identification and Presentation (CLIP)** - CLIP coming in from ISDN PRI and CO trunks should be displayed on Analog Telephones (with CLI), Digital Telephones and IP Telephones
- 2.3.11. **Ring back when free**
- 2.3.12. **Discriminate Ringing** - The offered system to provide distinctive ringing for internal calls, external calls, auto call back calls and certain emergency services.

- 2.3.13. **Music on hold** – The system should support MOH (Music on hold), which should be uploaded using the .wav file and shall have an audio input port for external MOH connectivity
- 2.3.14. **Boss-Secretary feature** - The incoming call to the officer shall ring on secretary's phone with option of ring on both telephones. It should be possible to activate the Boss/Secretary telephone for enabling the telephone for above features. It should be possible for the Boss/Secretary to contact each other using one touch key on digital telephone and by dialing one or two-digit code on analog telephone.
- 2.3.15. **IP Telephony Licenses** for connecting 50 IP phones from day one.
- 2.3.16. **Video Conferencing Services** –Capable of conducting video conferencing with minimum 4 parties and simultaneously at least 5 such video conferencing sessions shall be conducted with hard and soft IP phones. (H.323 & SIP support)

#### 2.4. HIGH AVAILABILITY AND REDUNDANCY

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- 2.4.1. There shall be hot redundancy at server, Gateway and power to ensure high availability of 99.99%
- 2.4.2. The facility shall automatically changeover to redundant server in case of failure of primary server without call drop
- 2.4.3. Required spares of all critical equipment shall be kept inside Valiamala campus to ensure system availability. The details of critical spares shall be furnished.
- 2.4.4. The hot redundancy and high availability has to be configured demonstrated before commissioning the facility.

#### 2.5. POWER SUPPLY REQUIREMENTS

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- 2.5.1. The supplier will be responsible for the supply, installation and commissioning of the online UPS with required capacity to maintain the telephone exchange proposed to supply including all servers and computers, FCBC, Gateways, Networking devices and other active devices.
- 2.5.2. Float cum Booster charger (FCBC) of appropriate capacity for supporting the IP-PBX system with sufficient DC supply and SMF batteries supporting at least 2 Hrs. backup time in case of a power loss, shall be supplied. Input Voltage 230V/50 Hz +/- 10% (Single Phase), proper protection mechanism from input/load fluctuations.

- 2.5.3. FCBC shall have proper monitoring - display LCD panel for voltage, current and other required parameters.
- 2.5.4. The UPS shall have minimum 4 hours backup time with full load in case of power failure
- 2.5.5. UPS & FCBC shall have N+1 redundancy
- 2.5.6. The UPS system shall have 3 Phase input with IGBT rectifier & inverter, DSP Online Double Conversion System, output THD <5%, and output power factor 0.8 or better
- 2.5.7. All the required racks for battery, cabling and accessories shall be provided by the supplier. LPSC will provide only the raw power (three phase input)
- 2.5.8. In case of a power failure automatic change over to the UPS and alert has to be generated.
- 2.5.9. Provision to monitor parameters of the UPS through Ethernet interface shall be provided.

#### **2.6. LIGHTNING PROTECTION & EARTHING**

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- 2.6.1. Valiamala is a highly lightning prone area. Supplier shall be responsible for providing adequate lightening protection for the Exchange side as well as the MDF side (telephone equipment level) including independent earthing.
- 2.6.2. There shall be provision for providing safety to the system from high voltage or voltage fluctuations
- 2.6.3. All extensions shall have IPM line protection modules and the supplied racks shall have EMI/RFI protection

#### **2.7. SOFTWARE: - CENTRALIZED MANAGEMENT, BILLING & CALL LOGGING**

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- 2.7.1. Supply, Installation & Maintenance of Web-based Centralized software with GUI for configuring, administering and monitoring of the system with facility for enabling & disabling features online with user authentication
- 2.7.2. Provision for sending Event notifications and alerts via E-mail /SMS to Administrators.
- 2.7.3. Software shall have provision to generate alerts and necessary status reports
- 2.7.4. Call billing and accounting software for external and internal calls
- 2.7.5. All Software supplied should have valid perpetual license and shall be customizable for the requirements of LPSC. OEM support for this has to be ensured.
- 2.7.6. Support for selective incoming/outgoing call recording

- 2.7.7. Soft IP phone client software for different platforms
- 2.7.8. All application software/Database package required for the completion of the project shall be supplied with valid perpetual licenses.

#### **2.8. INSTALLATION & MIGRATION TO NEW IP-PBX**

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- 2.8.1. Smooth Migration from existing Exchange to the new within minimum downtime shall be ensured. Supplier shall also provide the details of migration plan. Down time period will be the time mutually agreed by the supplier & LPSC. As part of this all existing telephone connections shall be made operational in the first phase itself.
- 2.8.2. Installation of IP-PBX system and cabling from system to MDFs (System side as well as Field side) has to be done by the supplier. Current Industry standards needs to be followed for the wiring of Telephone exchange.
- 2.8.3. All necessary interconnecting cables and accessories required for the installation such as CAT 6 UTP cable, RJ45 Jacks, CAT 6 Information Outlets, RJ 11 jacks, UTP Jack panels fully loaded with I/O modules, patch cords, casings, conduits, Krone modules etc. needs to be supplied
- 2.8.4. All cabling laying works required for the installation to be done by the party.
- 2.8.5. Supplier shall demonstrate all the features of the equipment mentioned in the tender as part of technical acceptance evaluation.
- 2.8.6. One official from LPSC will be identified as the focal point who will be in charge for the overall supervision of the installation and commissioning of the proposed exchange.
- 2.8.7. The decommissioning of the existing EPABX shall be done only after installation, commissioning and testing of the new IP-PBX system and with the concurrence of Focal point of LPSC.
- 2.8.8. Dismantling of existing EPABX Systems, transportation to LPSC stores, removal of debris, cleaning up the place and restoring the site to original condition when work was undertaken shall be the responsibility of the supplier.

#### **2.9. TRAINING & DOCUMENTATION**

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- 2.9.1. The supplier shall submit the installation report including the configuration & as built connectivity diagrams, operation and maintenance manuals, test certificates, brochures, original media and licenses of the softwares etc.



- 2.9.2. Onsite training shall be provided directly from the OEM/OEM certified engineer to nominated team of LPSC staff in Administration, Operations, Fault identification, Troubleshooting and Maintenance of the installed telephone exchange. Training shall be provided for at least three LPSC Officials at LPSC premises.
- 2.9.3. The Bidder shall make available adequate training material of the proposed system in the form of demos and help document for various functions carried out in the system

**2.10. COMPREHENSIVE WARRANTY & COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT (AMC)**

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- 2.10.1. The Bidder should provide 3 years Onsite Comprehensive Warranty support for the total exchange including all the supplied items, from the date of commissioning.
- 2.10.2. The Bidder shall also quote for comprehensive AMC for subsequent five years applicable after the completion of warranty period. However, award of AMC will be made through a separate Purchase order at the end of satisfactory completion of warranty period.
- 2.10.3. The party shall ensure the maintenance support for the service call within 4 hours at site. In the event of breakdown call is not attended, down-time compensation will be imposed, as applicable.
- 2.10.4. Monthly preventive maintenance shall be carried out includes cleaning and testing and the supplier will be responsible for up-keeping the facility for 24X7 Hour service.
- 2.10.5. Supplier shall maintain adequate spares for the up-keeping, maintenance and smooth functioning of all the equipment at LPSC premises.
- 2.10.6. Necessary upgradation of the Exchange in case of obsolescence as well as maintenance & supply of necessary spares shall be the responsibility of the supplier during the warranty and subsequent AMC period.
- 2.10.7. The supplier shall be responsible for all the upgrades and updates of the firmware and application software during the warranty period as well as the comprehensive AMC period. A declaration from the Supplier/OEM certification for up-keeping the telephone exchange during the 3 Year warranty period and subsequent 5 Year AMC period shall be submitted, even in case of the items are obsolete during the contract period
- 2.10.8. The quarterly payment of the AMC shall be made on submission of the duly certified bill along with quarterly status report.

#### **2.11. ONSITE RESIDENTIAL SUPPORT**

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- 2.11.1. The Supplier shall position one Onsite Residential Official in Valiamala for regular up-keeping, Administration & Operations of the IP-PBX, power plant and its operations.
- 2.11.2. Onsite Residential official shall have minimum qualification of Diploma in Electronics/Electrical/Computer Science and shall have expertise in up-keeping telephone exchanges.
- 2.11.3. Residential official shall strictly adhere to the disciplines and IT security policies being followed by LPSC/ISRO and have to produce Police Verification certificate in accordance with administrative guidelines
- 2.11.4. The residential official will be reporting and working under the Supervision of LPSC focal point.
- 2.11.5. Exchange services shall be ensured on 24X7 basis with minimum 99.5% availability
- 2.11.6. All reported issues shall be attended and resolved within maximum 4 hours on a working day
- 2.11.7. Residential official shall be available not only during office hours but also during holidays and late office hours whenever needed
- 2.11.8. It will be the responsibility of the supplier to meet transportation, food, medical and any other requirements in respect of the manpower deployed in LPSC and LPSC will have no liabilities in this regard
- 2.11.9. The residential official shall maintain records and registers such as Log book, Daily fault register etc.

#### **2.12. OTHERS**

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In addition to the above the unit rates for the following also shall be quoted:

- 2.12.1. The buyback option for the existing EPABX also shall be offered.
- 2.12.2. CLIP Phones 300 Nos. as per specifications in Annexure – B.1
- 2.12.3. IP Phones 50 Nos. as per specifications in Annexure – B.2

#### **2.13. TERMS AND CONDITIONS**

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- 2.13.1. The tender to be submitted in Two-Part mode. Techno-commercial bid (Part-I) and Price bid (Part-II) shall be submitted in separate sealed covers.

- 2.13.2. This project has to be executed on turnkey basis. Equipment / material not covered in this proposal but essential for the completion of the project shall be included in the Techno-Commercial bid. The bidder shall quote for all such items with unit rates in the price bid. The offer shall be for complete scope of work as specified in the tender document. Part/Split offer is NOT acceptable.
- 2.13.3. All items of the equipment/accessories in this tender shall be new and complete in all respect.
- 2.13.4. All IP devices supplied as part of this project shall be IP V4/ IPv6 compatible
- 2.13.5. The offered system should have a valid TEC (Telecommunication Engineering Center, Govt. of India) approval. TEC approval certificate copies should be enclosed along with the offer. The TEC Certification should be in the name of the OEM participating in the tender. The TEC Certification should be applicable for the offered products in specific.
- 2.13.6. During the tender evaluation phase, supplier may be asked to explain in person in the form of presentation and documents to satisfy their technical capability and plan for execution and they have to comply the same within the time schedule provided to them
- 2.13.7. LPSC will provide the required space, Air conditioning and KSEB power.
- 2.13.8. The Supplier shall ensure that all the precautions for the safety of the labourers are taken during the execution of works. The supplier shall be responsible for injury to persons and for damages to the properties which may arise from omission or neglect of the Supplier and their employees whether such injury or damages arise from carelessness, accident or any other cause whatsoever, in any way connected with the carrying out of work.
- 2.13.9. Vendor has to strictly follow the Guidelines of Dept. of Telecommunications & Dept. of Electronics & IT, Govt. of India wherever applicable.
- 2.13.10. The OEM shall provide undertaking to provide technical support and spares for particular system up to next 8 years even though if particular model is discontinued or its association with bidder / dealer is discontinued.
- 2.13.11. The Supplier shall provide all necessary licenses for integrating any SIP compliant IP phones from any manufacturer or soft phone as decided by the tenderer during the warranty/AMC period.
- 2.13.12. The vendors should be ready to demonstrate the offered product if demanded.

**2.14. ELIGIBILITY CRITERIA (To be included in the Technical Bid (Part-I) of the Tender)**

Suppliers who fulfill the following eligibility criteria only will be considered for the technical evaluation.

- 2.14.1. Supplier shall have at least five years of experience in the field of telecommunication industry. Certificate to this regard shall be enclosed in the bid.
- 2.14.2. Supplier shall have carried out at least two similar installations of IP-PBX systems with minimum 1000 connections in the last five years. They shall also produce the documentary evidence for the placement of Purchase orders, operations and maintenance support related to such ongoing contracts.
- 2.14.3. Details of previous installations of IP PBX with minimum 1000 lines IP exchange carried out by the bidder within last five years in the following format. Documentary evidence regarding the same shall be submitted and is mandatory.
- 2.14.4. ~~The OEM should be appearing in the latest Gartner Magic Quadrant for corporate telephony/Unified communication. (Documentary Proof should be attached).~~

Sl. No	Customer Name	Year of Installation	No. of connections	Details furnished ( Copy of Order, Completion Certificate, Performance Report on up-keeping the facility with contact details )

- 2.14.5. The supplier must be an Original Equipment Manufacturer (OEM) or should produce an undertaking from OEM that the bidder is authorized to quote for this tender and will provide support (back to back) and spares directly for the offered system. The authorization shall be tender specific.
- 2.14.6. Supplier should have ISO:9001 certificate and a copy of the certificate should be enclosed along with the offer.
- 2.14.7. The OEM should have ISO:9001 and ISO:14001 certificates and their copies must be enclosed along with the offer
- 2.14.8. The supplier shall not have been de-listed from business by any PSU/Government Department during last three years. Self-declaration in this regard shall be provided.

In case the declaration is found wrong, at any time during the processing of the tender, their offer won't be considered for further processing.

**2.0. TECHNICAL COMPLIANCE SHEET**

2.1. Bidder shall provide line by line Technical Compliance for each of the specifications mentioned in the tender (Sections 2.1 to 2.13), as per the following format

Sl. No	LPSC Specification	Offered Specification	Compliance (Yes / No)	Remarks, in case of any deviation

2.2. In case, the offered item deviates from the required specifications, the bidder shall indicate that clearly in the **Remarks** column of Technical Compliance Sheet

2.3. Bidder shall submit technical Brochure/Data Sheet for each of the offered item along with the technical bid. All the required/relevant specifications shall be highlighted in the data sheet.

2.4. For all items make and Model of the offered products has to be mentioned. Makes and models of offered products has to be mentioned separately in the following format

2.5.

Sl. No	Item	Make & Model	Data Sheet attached? (Yes / No)	Remarks in case of any deviation
		Make: Model:		

2.6. Bids without Technical Compliance Sheet are liable to be rejected.

**3.0. PRE-BID VISIT**

Before the submission of bid, bidders can make site visit for better understanding of existing Exchange in LPSC, Valiamala. However, advance intimation shall be made to Purchase so that entry pass shall be arranged and LPSC officials shall be co-ordinating with the respective teams for site visit.

#### 4.0. DETAILS TO BE FURNISHED

In addition to the documents mentioned earlier in the other sections the supplier also shall provide along Techno-Commercial Bid (Part-I)

- Details of the proposed system with as built Architecture Diagram. The diagram shall clearly depict all the system components, redundancy details, cable connectivity and interfacing with MDF.
- Time Schedule for Delivery, Installation & Commissioning of the System

#### 5.0. DETAILS OF EXISTING TELEPHONE EXCHANGE & SERVICES

The present Telephone Exchange in LPSC Valiamala is Ericsson make MD110 EPABX system which was procured in the year 2001 with 1000 lines and was upgraded to Ericsson BC12 model with support for 1250 lines in the year 2005. The Telephone Exchange is now under maintenance by private agency whereas the telephone services and telephone numbers are provided by M/s BSNL, Trivandrum. From the telephone exchange individual telephone connectivity is established through Campus-wide Telephone network with copper cable. Hotline facilities are established through M/s BSNL for providing local calling facility with ISRO Centers, which are terminated at the exchange

##### 5.1. EXISTING TELEPHONE EXCHANGE AND CIRCUIT DETAILS

At present the Telephone Exchange supports following lines:

- 4 x 2 Mbps PRI Streams (30 lines per stream)
- 1 x 2Mbps PRI hotline
- 2x 64 Kbps E&M Circuits
- 12 Voice circuits for Local calling
- 11 direct lines from Nedumangadu BSNL Exchange

A schematic diagram of the currently existing lines is shown in Fig 1.0

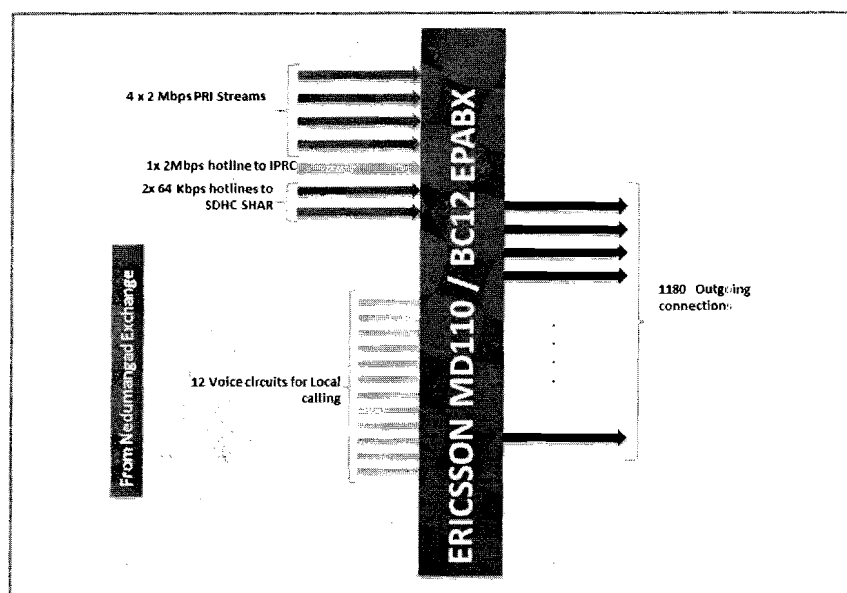


Fig 1.0 Circuit Details of Existing Telephone Network at LPSC Valiamala

#### 5.2. EXISTING TELEPHONE SERVICES

The following are the telephone services available presently with LPSC, Valiamala:

Sl No	Facility	No. of Connections
1	ISD Facility	19
2	STD Facility	204
3	Zero Dialing Facility (including local landline and local mobile numbers)	563
4	ISRO CENTRE CALLING FACILITY (VSSC, IPRC & SHAR)	38
5	INTERNAL CONNECTIONS	356
	<b>TOTAL CONNECTIONS</b>	<b>1180</b>

ANNEXURE - B.1

SPECIFICATIONS OF CLIP INSTRUMENT

- Caller Display LCD with backlit
- Minimum 50 incoming calls memory and minimum 10 outgoing calls memory  
Phonebook
- Alphanumeric Keypad
- Display of incoming numbers, repeat calls and total calls
- Conversation time display
- Ringer volume control switch
- Ringer melodies: 8 or more tones
- Speaker with Digital volume control
- Hands free Dialing
- LCD contrast adjustable
- Two-way speaker phone
- In-use LED Indication
- Tone/pulse switchable through soft switch
- Visual indication for ringer
- Mute (Toggle), flash and redial function
- 16-digit LCD display for name and number
- Calendar
- Alarm
- Wall or Deck Mountable
- Comprehensive Warranty: 3 years



ANNEXURE- B.2

SPECIFICATIONS OF IP PHONE

1. LCD Display with Backlit
2. Support SIP / H.323 protocol
3. Standards based codec support: G.711 / G.729A / G.729B / G.722
4. Full Duplex Dual Ethernet Ports (10/100 Mbps)
5. PoE Class (IEEE 802.3af) registers as class 1 (or higher) device
6. IP phone shall be powered via external power adapter, power patch panel or in line power of the switch
7. Hard button for Hold, Mute, Conference, Drop, Transfer, Speaker, Redial, Volume control, Messages, Menu, Contacts, Headset
8. Wideband audio for both headset and handset
9. Full duplex speaker phone
10. Support for minimum 100 call log entries
11. Omni direction microphone and echo cancellation
12. Desk /wall mountable support
13. Comprehensive Warranty: 3 Years

**General Terms and Conditions:**

**1. Earnest Money Deposit :**

Earnest Money Deposit amounting to **Rs.5,00,000/-** shall invariably be submitted by you along with your offer. Offer without EMD will be rejected. The EMD shall be submitted in the form of Demand Draft/Bankers Cheque/FD receipts or Bank Guarantee drawn in favour of Accounts Officer, LPSC and payable at Thiruvananthapuram. Submission of EMD is exempted in respect of Registered vendors, Foreign vendors, CPSU/CPSE, MSE, KVIC, NSIC. Vendors seeking exemption from payment of EMD shall submit necessary proof like registration number, copy of relevant valid certificates along with your offer, failing which the said offer will be rejected. The EMD of a vendor will be forfeited if the vendor withdraws or amends their tender or deviates from the tender in any respect within the validity period of the tender.

**2. Purchase / Price Preference to MSEs**

Purchase/Price preference will be applicable to the product reservation admissible to the Micro and Small Enterprises. Purchase/Price Preference shall be extended to the MSEs under the Public Procurement Policy for MSEs formulated under the Micro, Small and Medium Enterprises Development Act, 2006. The participating MSEs in a tender, quoting price within the band of L-1 + 15% may also be allowed to supply a portion of the requirement by bringing down their price to the L-1 price, in a situation where L-1 price is from someone other than an MSE. Such MSEs may be allowed to supply upto 20% of the total tendered value. In case of more than one such eligible MSE, the supply will be shared equally. .

**3. Security Deposit**

On acceptance of the order, you shall submit an interest free amount equivalent to 10% of the total contract/order value towards security deposit. This security deposit is collected towards the performance of the Contract. The said Security Deposit shall be submitted either in the form of Bank Guarantee/Demand Draft/PDR receipts duly endorsed in the name of the centre. The Security Deposit will be returned to you on successful completion of the Contractual obligations; failing which it shall be forfeited/adjusted.

**4. PERFORMANCE BANK GUARANTEE:**

A Bank Guarantee (as per the format enclosed) for 10% of the order value) shall be provided immediately within 10 days after supply or along with supply towards the performance of the system. The Bank Guarantee should be from a Nationalised / Scheduled Bank in Rs.200 non-judicial stamp paper valid till the successful completion of warranty period plus 60

days. This will not carry any interest and shall be returned to you after successful completion of warranty period against your request. In case of non performance/poor performance the Bank Guarantee shall be forfeited.

**5. Offer Validity**

Your offer shall be valid for 120 days from the date of tender opening. In case you offer validity less than 120 days, the said offer is liable for rejection which may please be noted.

**6. Liquidated Damages:**

If you fail to deliver the ordered items satisfactorily within the time specified or any extension thereof, Liquidated Damage @ 0.5%(zero point five percent) of the order value or part thereof the un-delivered items for each calendar weeks of delay shall be recovered from your bill. However total Liquidated Damage shall not exceed 10%(ten percent) of the order value.

7. Tender fee **Rs.590/- (Rupees Five Hundred and Ninety only )** shall be payable only in the form of Bank draft in favour of Accounts Officer, LPSC, Valiamala payable at Trivandrum and the same shall be enclosed along with your offer, **without which your offer will not be considered.**

8. **Payment terms:** 100% Payment would be made within 30 days on prorata basis after certification of the work by the LPSC Contract Manager.

9. The work shall be executed at LPSC Valiamala.

10. The work shall be carried out strictly to our satisfaction.

11. **Insurance:** You shall arrange personal insurance (All risk insurance coverage) for the labours being deployed for the work and produce certificates for verification before commencing the work at your cost.

12. You shall employ only qualified/experienced Indian Nationals. You shall follow the security guidelines of LPSC.

**13. Other Terms and Conditions:**

13.1 The Service Provider shall comply with all statutory rules *and regulations in force in the country including labour and other laws/acts.*

13.2 The *character and other antecedents* in respect of the Personnel being engaged shall be got verified through record check by the Service Provider from the concerned Police authorities, *and a Police Clearance Certificate (PCC) obtained\_* and submit the Original PCC to LPSC within in one month from the date of execution of Contract.

13.3 LPSC, being a High Security area, the Service Provider, if selected, will be required to follow the security requirements, *and the personnel engaged shall be possessing a valid ID card issued by the Service Provider while entering the campus, maintaining high order of discipline while on duty and ensuring that only the Personnel whose character and antecedents are verified beforehand are employed.*

**14. Liabilities, Control etc. of the Persons Deployed:**

14.1 The Personnel engaged shall reach the work spot well in time and strictly follow the rules and regulations regarding safety and security of this office.

14.2 The Personnel engaged shall attend for duties by making their own transport arrangement. During Office hours, medical assistance on emergencies in LPSC campus can be provided by the Department from the First Aid centre, Valiamala and beyond that the Service Provider has to take care.

14.3 The Service Provider shall be solely responsible for any theft, pilferage or misbehavior committed by any of his Personnel engaged for carrying out the work.

14.4 In case, the Personnel engaged by the Service Provider commits any act of omission/commission that amounts to misconduct/indiscipline/incompetence, the Service Provider shall be liable to take appropriate disciplinary action against such persons, including their removal from the duty. The Service Provider shall replace immediately any of his Personnel who is/are found unacceptable because of security risks, incompetence, conflict of interest improper conduct etc., upon receiving written notice from LPSC.

**15 Terms and Conditions or Clauses not covered in this document:**

Any other terms, conditions or clauses not covered in this document shall be in accordance with the concerned Labour and other statutory rules/acts.

**16. Termination of contract**

16.1 LPSC reserves the right to terminate the contract wholly or partly without assigning any reasons by giving a prior notice of 30 days.

16.2 LPSC reserves the right to terminate the contract wholly or partly owing to cessation of job requirement, sub-standard quality of Personnel engaged, breach of contract.

**17. Jurisdiction**

The Courts within Thiruvananthapuram will have the Jurisdiction to deal with and decide any matter arising out of this contract.

**18. Applicable Law:**

The contract shall be interpreted, construed and governed by the Laws of India.

**19. Arbitration:**

In the event of any dispute or difference relating to the interpretation and application of the contract, such dispute or difference shall be settled amicably by mutual consultations of the good offices of the respective parties. If such a resolution is not possible, then the unresolved dispute or difference shall be referred to the Sole Arbitrator appointed by Director, LPSC in accordance with the rules and procedures of Arbitration and Conciliation Act, 1996 or any modification thereof. The decision of the Arbitrator shall be final and binding on both the parties. The expenses for the Arbitration shall be paid as may be determined by the Arbitrator. The Arbitration shall be conducted in Thiruvananthapuram.

**20. Compensation for Damages caused for Persons Goods, Property:**

20.1 LPSC and/or any Officer, Employees or assignee thereof, shall be indemnified and held harmless, against any loss, damage or expense resulting from damage to property or personnel injury arising out of willful misconduct or gross negligence of the Service Provider or their personnel in the execution of the work under this Contract. You shall, at your expense defend any suit or proceedings brought against LPSC on account thereof, and shall satisfy all judgment and pay all expenses, which may be incurred by or rendered against them, or any of them in connection therewith.

20.2 LPSC shall not be responsible of any damages, loss, claims, finance and other injury for any Personnel in course of their performance of their duties or for payment towards any compensation.

21. LPSC will provide Canteen facility to the Personnel at the appropriate rate fixed by the Department, as applicable to such category of personnel.

(K.L. BABY)  
Sr. Purchase and Stores Officer  
For and on behalf of the President of India  
(The Purchaser)

**QUOTATION AGAINST TENDER NO TP13 2017030423****DUE ON 29.01.2018 at 16.00 hrs IST****OPENING ON 30.01.2018 at 10.30 hrs IST****SUPPLY, INSTALLATION, COMMISSIONING, OPERATION AND MANAGEMENT OF IP PBX WITH SERVER AT LPSC,  
VALIAMALA****PART II - PRICE BID**

THE TWO SEALED COVERS PREPARED AS ABOVE SHOULD BE KEPT IN ANOTHER ENVELOPE, SEALED AND SUPERSCRIBED AS UNDER:-

Quotation against Tender No. TP13 2017030423 Due on 29.01.2018 at 16.00 hrs IST for **SUPPLY, INSTALLATION, COMMISSIONING, OPERATIONS AND MANAGEMENT OF IP PBX WITH SERVER-GATEWAY AT LPSC, VALIAMALA** containing **TWO SEPARATE COVERS PART-1 & PART -II** and addressed to:

**SR.PURCHASE & STORES OFFICER  
Liquid Propulsion Systems Centre  
Valiamala (PO)  
Thriuvananthapuram- 695 547.**

The cover should indicate " **SENDER'S** " address

For any clarification you may contact us at following phone/Fax Nos.

Telephone : 0471 2567726/0471 2567727

Fax : 0472 2800712/0471 2567305

Your offer should reach us on or before the due date and time i.e. **29.01.2018 at 16.00 hrs IST. Offers received after the due date and time will not be considered.**

**Offers received through fax or email will not be considered.**

**Note:**

Tender fee **Rs.590/- (Rupees Five Hundred and Ninety only)**(Including GST) shall be payable only in the form of Bank draft in favour of Accounts Officer, LPSC, Valiamala payable at Trivandrum and the same shall be enclosed along with Part-I, Techno-Commercial Bid, **without which your offer will not be considered.**

**Annexure-III to T.E.No.TP13 2017030423**

**INSTRUCTIONS FOR TWO PART TENDERS.**

1. We invite your offer duly signed, in **TWO** parts as follows:-

(a) **PART- I : TECHNICAL & COMMERCIAL** (Other than Price)

(b) **PART -II : PRICE BID**

**1.1 PART-I : TECHNICAL & COMMERCIAL**

1.1.1 **TECHNICAL:** The detailed Scope of work and other technical details for the proposed Supply, Installation, Commissioning, Operations and Management of IP PBX with Server as detailed in RFP as per Annexure I, and Commercial Terms as per Annexure II shall be covered in this part. Please enclose a copy of the details indicated in price quotation (**WITHOUT PRICES OR BY MASKING THE PRICE**) mainly to know the items/ services for which you have indicated prices in price bid. **This part should not contain prices.** The Technical and commercial part of the offer should be kept in a sealed envelope superscribing the following details.

<p style="text-align: center;"><b>QUOTATION AGAINST TENDER No. <u>TP13 2017030423</u></b></p> <p style="text-align: center;"><b>DUE ON 29.01.2018 at 16.00 hrs IST</b></p> <p style="text-align: center;"><b>OPENING ON 30.01.2018 at 10.30 hrs IST</b></p> <p style="text-align: center;">SUPPLY, INSTALLATION, COMMISSIONING, OPERATION AND MANAGEMENT OF IP PBX WITH SERVER AT LPSC, VALIAMALA</p> <p style="text-align: center;"><b>PART I - TECHNICAL &amp; COMMERCIAL</b></p>
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The cover should indicate " **SENDER'S**" address.

**1.2. PART -II : PRICE BID**

1.2.1. This part shall contain **PRICE** details only.

1.2.2. The price for the item should be indicated item wise in this part as per the price format. All the items/ services mentioned in the Technical Part should come here and prices indicated against each. The break-up for each item or services should be indicated.

1.2.3. Whenever options are quoted, the same should also be indicated with quantity and unit rate separately. The prices are to be mentioned both in figures and in words. This part should also be kept in a sealed cover superscribing as follows:-

## Technical Comparison Sheet----Format

Sl. No	LPSC Specification	Offered Specification	Compliance (Yes / No)	Remarks, in case of any deviation
.1.1	Supply, Installation and commissioning of IP-based Private Branch Exchange with Server-Gateway Architecture which has to be positioned at LPSC, Valiamala capable of supporting existing 1450 analog telephone connections. The System shall have expandability of up to 2000 Analog/IP connections. The required telecommunication equipment/s shall be supplied and installed in the same Telephone Exchange room in LPSC Valiamala.			
.1.2	Minimum 6 Nos. of PRI interface, Minimum 2 Nos. of E&M Interface, minimum 12 Trunk line interface, 50 IP Licenses, Gateway supporting 1450 analog connections, GSM/3G/4G interface and L3/L2 Network Switches has to be supplied			
.1.3	Supply & Installation of minimum 2000 port Main Distribution Frames (MDF) supporting both field side and exchange side, Krone modules, Interconnecting cables, Equipment Racks, and all the related equipment/Systems for the Exchange			
	Supply and installation of sufficient numbers of Computers/Laptops for Administration, Operations and Maintenance of the Exchange. (Core i5 7 <sup>th</sup> Gen, 3.2GHz/8GB, DDR-IV/1TB SATA HDD/external NIC/19" LCD Monitor)			
.1.5	The system shall be fully modular and fully non-blocking type with distributed architecture. It shall have all the features as mentioned in Section 2.2 & 2.3			
.1.6	The IP-PBX must be highly available ensuring an uptime of at least 99.99% as per the Section 2.4			
.1.7	Necessary power supply units, FCBC and UPS of sufficient capacity shall be supplied. Power supply and UPS requirements are detailed in Section 2.5			
.1.8	Supply & Installation of lightning protection as per Section 2.6			
.1.9	Supply, Installation & Configuration of Management & Call billing Software as per Section 2.7			
.1.10	Installation, Testing & Commissioning of IP-PBX shall be carried out as per the details in Section 2.8 & 2.9			
.1.11	Comprehensive Warranty for 3 years from the date of Commissioning of the facility shall be provided.			
.1.12	Comprehensive Annual Maintenance Contract for subsequent 5 years after the warranty period also shall be quoted separately. More details as per Section 2.10			
.2.	<b>SYSTEM FEATURES</b>			
.2.1	The system shall be of Server-Gateway architecture with redundancy server with redundant hot swappable power supply			
.2.2	The server shall be 19" rack mountable type sufficient to handle the exchange.			
.2.3	The Server-Gateway connection shall be on a standard interface like Ethernet			
4	The Exchange shall be able to switch simultaneously voice, data and images without any degradation of service quality			



2.2.5	The system shall automatically changeover to redundancy server in case of failure of primary server without call drop			
2.2.6	The proposed system shall have Automatic Route Selection (ARS), Least Cost Routing (LCR), Automatic Call Distribution, Unified Communication, Encryption, FAX Support and QoS support			
2.2.7	Exchange level switching shall be purely IP-based and Media Gateways shall be used for interfacing between with analog devices and sufficient licenses needs to be supplied if required.			
2.2.8	Media gateway shall be modular with web managing interface, SNMPv1, V3, Telnet, Fax and modem over IP, IP v4/V6 and routing & switching functionalities			
2.2.9	Sufficient numbers of Layer 3 and Layer 2 Networking devices needs to be supplied.			
2.2.10	The IP-PBX should be able to integrate with public telecom network infrastructure (PSTN/ISDN/E1), Mobile Network (GSM / 3G/ 4G) and legacy interfaces (like E&M)			
2.2.11	The system shall support sufficient number of analog extensions, digital extensions, trunk lines, PRI lines and E&M lines			
2.2.12	The system shall support wide range of terminals including Analog Phone, Digital Phone, IP phones (Hard, Soft & Wireless), SIP Extensions and soft phone including third party phones from day one. All necessary hardware should be provisioned for this from day one.			
2.2.13	Support for SIP and H.323 Signaling protocols			
2.2.14	The system shall support IPv4 and IPv6. Documentary evidence from OEM shall be submitted for the same.			
2.2.15	In case of failure of any external trunk line connectivity, internal telephone communications within LPSC shall not be affected and automatic switch over to the redundant trunk line shall be ensured.			
2.2.16	All existing phone numbers which are allotted by M/s BSNL shall be retained as such. It shall be the responsibility of the supplier to interact with M/s BSNL and make provision for the same			
2.2.17	Existing 4-digit Direct Inward Dialing (DID) level has to be retained for Closed User Group (CUG) Calling			
2.2.18	Hotline facilities through 2 Nos. of E&M and 1 no PRI with other ISRO Centers shall be retained			
2.2.19	Existing campus-wide telephone network and telephone instruments shall be retained and interconnected to the proposed exchange.			
2.2.20	System should ensure the compatibility with the existing analog phones available in the centre.			
2.2.21	Even though the currently proposed Telephone Exchange is centralized architecture, in future there may be necessity for distributed telephone exchange in various locations of Valiamala. The proposed system shall have the flexibility to establish the distributed exchange.			
2.2.22	In case of distribution of Exchange is necessitated later, Supplier shall carry out all activities related to its Installation & Operations.			
2.2.23	The system should adhere communication security standards and approvals in Network, Call sever and management in accordance with the guidelines made by Dept. of Telecommunications & Dept. of Electronics & IT, Govt. of India			
2.3.1	<b>2.1. TELEPHONY FEATURES</b>			
	Following services shall be available:			

2.3.1	<b>Voice Mail</b> application allowing callers to leave messages. It shall have proper methods to alert users about the presence of voice mail and also easy way to listen to those voice mails. Simultaneous usage of minimum 16 ports and minimum 8 Hours of data storage is required. Voice mail to email option and support unified messaging with compliant email applications like Outlook, Domino etc. The System should support voice mail access through web browser and external Fax server integration.			
2.3.2	<b>Auto Attendant</b> shall greet incoming calls, announce service message and interactively assist the external callers to reach their destination easily with distinct message options			
2.3.3	<b>Call Forwarding</b> - To redirect the incoming calls to an extension to another phone.			
2.3.4	<b>Call Recording</b> – Minimum 10 telephone numbers have to be simultaneously recorded with storage for retaining at least one-month data. The numbers/calls to be recorded (including PSTN) shall be selectable and dynamically changeable through software interface with proper authentication.			
2.3.5	<b>Automatic Call Transfer</b>			
2.3.6	<b>Consultation Hold</b>			
2.3.7	<b>Call Park</b> - This allows to put an Ongoing call on hold and then retrieve the same call from any other phone on the system.			
2.3.8	<b>Conference Call</b> – The system shall have minimum 10-party simultaneous voice conferencing in any combination of external and internal parties			
2.3.9	<b>STD locking feature</b>			
2.3.10	<b>Caller Line Identification and Presentation (CLIP)</b> - CLIP coming in from ISDN PRI and CO trunks should be displayed on Analog Telephones (with CLI), Digital Telephones and IP Telephones			
2.3.11	<b>Ring back when free</b>			
2.3.12	<b>Discriminate Ringing</b> - The offered system to provide distinctive ringing for internal calls, external calls, auto call back calls and certain emergency services.			
2.3.13	<b>Music on hold</b> – The system should support MOH (Music on hold), which should be uploaded using the .wav file and shall have an audio input port for external MOH connectivity			
2.3.14	<b>Boss-Secretary feature</b> - The incoming call to the officer shall ring on secretary's phone with option of ring on both telephones. It should be possible to activate the Boss/Secretary telephone for enabling the telephone for above features. It should be possible for the Boss/Secretary to contact each other using one touch key on digital telephone and by dialing one or two-digit code on analog telephone.			
2.3.15	<b>IP Telephony</b> Licenses for connecting 50 IP phones from day one.			
2.3.16	<b>Video Conferencing Services</b> – Video conference up to 4 parties with hard and soft IP phones. Necessary video conferencing bridges has to be supplied (H.323 & SIP support)			
2.4	<b>HIGH AVAILABILITY AND REDUNDANCY</b>			
2.4.1	There shall be hot redundancy at server, Gateway and power to ensure high availability of 99.99%			
2.4.2	The facility shall automatically changeover to redundant server in case of failure of primary server without call drop			
2.4.3	Required spares of all critical equipment shall be kept inside Valiamala campus to ensure system availability. The details of critical spares shall be furnished.			
2.4.4	The hot redundancy and high availability has to be configured demonstrated before commissioning the facility.			
2.5	<b>POWER SUPPLY REQUIREMENTS</b>			

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2.5.1	The supplier will be responsible for the supply, installation and commissioning of the online UPS with required capacity to maintain the telephone exchange proposed to supply including all servers and computers, FCBC, Gateways, Networking devices and other active devices.			
2.5.2	Float cum Booster charger (FCBC) of appropriate capacity for supporting the IP-PBX system with sufficient DC supply and SMF batteries supporting at least 2 Hrs. backup time in case of a power loss, shall be supplied. Input Voltage 230V/50 Hz +/- 10% (Single Phase), proper protection mechanism from input/load fluctuations.			
2.5.3	FCBC shall have proper monitoring - display LCD panel for voltage, current and other required parameters.			
2.5.4	The UPS shall have minimum 6 hours backup time in full load in case of power failure			
2.5.5	UPS & FCBC shall have N+1 redundancy			
2.5.6	The UPS system shall have 3 Phase input with IGBT rectifier & IGBT inverter, DSP Based True Online Double Conversion System, output THD <5%, and output power factor 0.8 or better			
2.5.7	All the required racks for battery, cabling and accessories shall be provided by the supplier. LPSC will provide only the raw power (three phase input)			
2.5.8	In case of a power failure automatic change over to the UPS and alert has to be generated.			
2.5.9	2.1.1. Provision to monitor parameters of the UPS through Ethernet interface shall be provided.			
2.6	<b>LIGHTNING PROTECTION &amp; EARTHING</b>			
2.6.1	Valiamala is a highly lightning prone area. Supplier shall be responsible for providing adequate lightening protection for the Exchange side as well as the MDF side (telephone equipment level) including independent earthing.			
2.6.2	There shall be provision for providing safety to the system from high voltage or voltage fluctuations			
2.6.3	All extensions shall have IPM line protection modules and the supplied racks shall have EMI/RFI protection			
2.7	<b>SOFTWARE: - CENTRALIZED MANAGEMENT, BILLING &amp; CALL LOGGING</b>			
2.7.1	Supply, Installation & Maintenance of Web-based Centralized software with GUI for configuring, administering and monitoring of the system with facility for enabling & disabling features online with user authentication			
2.7.2	Provision for sending Event notifications and alerts via E-mail /SMS to Administrators.			
2.7.3	Software shall have provision to generate alerts and necessary status reports			
2.7.4	Call billing and accounting software for external and internal calls			
2.7.5	All Software supplied should have valid perpetual license and shall be customizable for the requirements of LPSC. OEM support for this has to be ensured.			
2.7.6	Support for selective incoming/outgoing call recording			
2.7.7				
2.7.8	All application software/Database package required for the completion of the project shall be supplied with valid perpetual licenses.			
2.8	<b>2.1. INSTALLATION &amp; MIGRATION TO NEW IP-PBX</b>			
2.8.1	Smooth Migration from existing Exchange to the new within minimum downtime shall be ensured. Supplier shall also provide the details of migration plan. Down time period will be the time mutually agreed by the supplier & LPSC. As part of this all existing telephone connections shall be made operational in the first phase itself.			

2.8.2	Installation of IP-PBX system and cabling from system to MDFs (System side as well as Field side) has to be done by the supplier. Current Industry standards needs to be followed for the wiring of Telephone exchange.			
2.8.3	All necessary interconnecting cables and accessories required for the installation such as CAT 6 UTP cable, RJ45 Jacks, CAT 6 Information Outlets, RJ 11 jacks, UTP Jack panels fully loaded with I/O modules, patch cords, casings, conduits, Krone modules etc. needs to be supplied			
2.8.4	All Civil, Electrical and cabling works required for the installation to be done by the party.			
2.8.5	Supplier shall demonstrate all the features of the equipment mentioned in the tender as part of technical acceptance evaluation.			
2.8.6	One official from LPSC will be identified as the focal point who will be in charge for the overall supervision of the installation and commissioning of the proposed exchange.			
2.8.7	The decommissioning of the existing EPABX shall be done only after installation, commissioning and testing of the new IP-PBX system and with the concurrence of Focal point of LPSC.			
2.8.8	Dismantling of existing EPABX Systems, transportation to LPSC stores, removal of debris, cleaning up the place and restoring the site to original condition when work was undertaken shall be the responsibility of the supplier.			
2.9	<b>TRAINING &amp; DOCUMENTATION</b>			
2.9.1	2.1.1. The supplier shall submit the installation report including the configuration & as built connectivity diagrams, operation and maintenance manuals, test certificates, brochures, original media and licenses of the softwares etc.			
2.9.2	Onsite training shall be provided directly from the OEM/OEM certified engineer to nominated team of LPSC staff in Administration, Operations, Fault identification, Troubleshooting and Maintenance of the installed telephone exchange. Training shall be provided for at least three LPSC Officials at LPSC premises.			
2.9.3	The Bidder shall make available adequate training material of the proposed system in the form of demos and help document for various functions carried out in the system			
2.10.	<b>COMPREHENSIVE WARRANTY &amp; COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT (AMC)</b>			
2.10.1	The Bidder should provide 3 years Onsite Comprehensive Warranty support for the total exchange including all the supplied items, from the date of commissioning.			
2.10.2	The Bidder shall also quote for comprehensive AMC for subsequent five years applicable after the completion of warranty period. However, award of AMC will be made through a separate Purchase order at the end of satisfactory completion of warranty period.			
2.10.3	The party shall ensure the maintenance support for the service call within 4 hours at site. In the event of breakdown call is not attended, down-time compensation will be imposed, as applicable.			
2.10.4	Monthly preventive maintenance shall be carried out includes cleaning and testing and the supplier will be responsible for up-keeping the facility for 24X7 Hour service.			
2.10.5	Supplier shall maintain adequate spares for the up-keeping, maintenance and smooth functioning of all the equipment at LPSC premises.			
2.10.6	Necessary upgradation of the Exchange in case of obsolescence as well as maintenance & supply of necessary spares shall be the responsibility of the supplier during the warranty and subsequent AMC period.			

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2.10.7	The supplier shall be responsible for all the upgrades and updates of the firmware and application software during the warranty period as well as the comprehensive AMC period. A declaration from the Supplier/OEM certification for up-keeping the telephone exchange during the 3 Year warranty period and subsequent 5 Year AMC period shall be submitted, even in case of the items are obsolete during the contract period			
2.10.8	The pro-rata quarterly payment of the AMC shall be made on submission of the duly certified bill along with quarterly status report.			
2.11	<b>2.1. ONSITE RESIDENTIAL SUPPORT</b>			
2.11.1	The Supplier shall position one Onsite Residential Official in Valiamala for regular up-keeping, Administration & Operations of the IP-PBX, power plant and its operations.			
2.11.2	Onsite Residential official shall have minimum qualification of Diploma in Electronics/Electrical/Computer Science and shall have expertise in up-keeping telephone exchanges.			
2.11.3	Residential official shall strictly adhere to the disciplines and IT security policies being followed by LPSC/ISRO and have to produce Police Verification certificate in accordance with administrative guidelines			
2.11.4	The residential official will be reporting and working under the Supervision of LPSC focal point .			
2.11.5	Exchange services shall be ensured on 24X7 basis with minimum 99.5% availability			
2.11.6	All reported issues shall be attended and resolved within maximum 4 hours on a working day			
2.11.7	Residential official shall be available not only during office hours but also during holidays and late office hours whenever needed			
2.11.8	It will be the responsibility of the supplier to meet transportation, food, medical and any other requirements in respect of the manpower deployed in LPSC and LPSC will have no liabilities in this regard			
2.11.9	The residential official shall maintain records and registers such as Log book, Daily fault register etc.			
2.12	<b>OTHERS</b>			
	In addition to the above the unit rates for the following also shall be quoted:			
2.12.1	The buyback option for the existing EPABX also shall be offered			
2.12.2	CLIP Phones 300 Nos. as per specifications in Annexure – B.1			
2.12.3	IP Phones 50 Nos. as per specifications in Annexure – B.2			
2.13	<b>TERMS AND CONDITIONS</b>			
2.13.1	The tender to be submitted in Two-Part mode. Techno-commercial bid (Part-I) and Price bid (Part-II) shall be submitted in separate sealed covers.			
2.13.2	This project has to be executed on turnkey basis. Equipment / material not covered in this proposal but essential for the completion of the project shall be included in the Techno-Commercial bid. The bidder shall quote for all such items with unit rates in the price bid. The offer shall be for complete scope of work as specified in the tender document. Part/Split offer is NOT acceptable.			
2.13.3	All items of the equipment/accessories in this tender shall be new and complete in all respect.			
2.13.4	All IP devices supplied as part of this project shall be IP V4/ IPv6 compatible			
2.13.5	The offered system should have a valid TEC (Telecommunication Engineering Center, Govt. of India) approval. TEC approval certificate copies should be enclosed along with the offer. The TEC Certification should be in the name of the OEM participating in the tender. The TEC Certification should be applicable for the offered products in specific.			

2.13.6	During the tender evaluation phase, supplier may be asked to explain in person in the form of presentation and documents to satisfy their technical capability and plan for execution and they have to comply the same within the time schedule provided to them			
2.13.7	LPSC will provide the required space, Air conditioning and KSEB power.			
2.13.8	The Supplier shall ensure that all the precautions for the safety of the labourers are taken during the execution of works. The supplier shall be responsible for injury to persons and for damages to the properties which may arise from omission or neglect of the Supplier and their employees whether such injury or damages arise from carelessness, accident or any other cause whatsoever, in any way connected with the carrying out of work.			
2.13.9	Vendor has to strictly follow the Guidelines of Dept. of Telecommunications & Dept. of Electronics & IT, Govt. of India wherever applicable.			
2.13.10	The OEM shall provide undertaking to provide technical support and spares for particular system up to next 8 years even though if particular model is discontinued or its association with bidder / dealer is discontinued.			
2.13.11	The Supplier shall provide all necessary licenses for integrating any SIP compliant IP phones from any manufacturer or soft phone as decided by the tenderer during the warranty/AMC period.			
2.13.12	The vendors should be ready to demonstrate the offered product if demanded.			

**COMPLIANCE STATEMENT FOR COMMERCIAL TERMS**

34

Sl. No. (1)	Description (Commercial terms & conditions) (2)	Compliance to Col. (2) [YES/NO] (3)	Remarks (4)
1.	P & F charges, if any, (If mentioned as EXTRA OR INCLUDED in your quote, please mention the percentage in Remarks Column)..		
2.	Whether applicable GST percentage mentioned in offer (If mentioned as EXTRA OR INCLUDED in your quote, please mention the percentage in Remarks Column).		
3.	Please specify whether you are a registered vendor (If NO, please mention the same in remarks column)		
4.	ISRO is exempted from payment of Customs Duty vide Notification No.12/2012-Customs dated 17.03.2012.  [We will provide Customs Duty Exemption Certificate for bought out items being imported for manufacturing the ordered items (List of items to be imported with quantities to be enclosed along with offer) OR for Orders placed on Foreign Vendors OR for High Sea Sale orders.]		
5.	Installation Charges, if any, (If mentioned as EXTRA OR INCLUDED in your quote, please mention the percentage in Remarks Column).		
6.	<b>Delivery Term :-</b> <ul style="list-style-type: none"> <li>• FOR : LPSC, VALAIAMALA</li> <li>• In case of Foreign orders, FOB or FCA</li> </ul>		
7.	Freight charges, if any. (If mentioned as EXTRA OR INCLUDED in your quote, please mention the percentage in Remarks Column).		
8.	Delivery Period (If any specific delivery period is mentioned in the tender, please comply the same. If not agreed, please mention your delivery period in remarks column OR if already mentioned in your quote please mention as "already furnished in the quote")		
10.	<b>Payment Term :-</b> (a) 100% payment shall be made through RTGS within 30 days of receipt and acceptance of the item at our site.  (b) In case of Foreign orders, Payment term shall be SIGHT DRAFT / 80% BY IRREVOCABLE LETTER OF CREDIT AND BALANCE 20% BY WIRE TRANSFER AFTER RECEIPT & ACCEPTANCE OF THE ORDERED ITEM.		
11.	<b>Liquidated Damages (LD) :-</b> If the ordered items are not supplied within the delivery schedule, LD shall be levied from your bill @ 0.5% per week for the undelivered items subject to a maximum of 10% of the order value for the delayed period. <b>(Note : This is a mandatory clause)</b>		

Sl. No. (1)	Description (Commercial terms & conditions) (2)	Compliance to Col. (2) [YES/NO] (3)	Remarks (4)
12.	<b>Warranty :-</b> Warranty for the offered item shall be from the date of installation/acceptance of the item at our site for a minimum period of one year or as specified in the tender document.		
13.	<p><b>Security Deposit (SD) :-</b></p> <p>You have to furnish a Bank Guarantee for 10% of the order value within 10 days of receipt of Order towards the faithful execution of the order valid till the completion of the scope of work as per order plus sixty days. (This will be returned to you immediately on execution of the order satisfactorily as per order terms. In case of non-performance / poor performance, the amount will be forfeited).</p> <p><b><u>SECURITY DEPOSIT NOT REQUIRED FOR LANDED COST BELOW RS.5 LAKHS.</u></b></p> <p><i>(NB : If the quoted price is below Rs.5L, please mention NOT APPLICABLE in the Remarks Column. Also, Micro &amp; Small Enterprises registered under NSIC is eligible for exemption from submission of BG. Instead they have to submit Indemnity Bond for 10% of order value. The exemption shall be allowed against production of Documentary Proof upto the monetary limit indicated in the NSIC Certificate. Please mention the same in the Remarks column.)</i></p>		
14	<p><b>Performance Bank Guarantee (PBG) :-</b></p> <p>You have to submit a PBG from a Nationalised / Scheduled Bank for 10% of the order value towards the performance of the system at the time of supply valid till the completion of warranty period plus 60 days as per the format provided by the Department.</p> <p>OR</p> <p>10% OF THE ORDER VALUE SHALL BE WITH HELD TILL THE COMPLETION OF WARRANTY PERIOD PLUS 60 DAYS.</p>		
15..	In case, if parties are unable to provide two separate BGs, i.e., one for SD and one for PBG, they can submit a combined BG for SD & PBG within 10 days of receipt of order for 10% of order value valid till the completion of total contractual obligation (i.e., supply period + warranty period + 60 days) as per the format provided by the Department.		
16.	<p><b>Insurance :-</b></p> <p>Being a Govt. Of India Dept., Insurance is not required at our cost. Please ensure the safe delivery of the ordered item with proper AIR / SEA / ROAD worthy packing.</p>		



Sl. No. (1)	Description (Commercial terms & conditions) (2)	Compliance to Col. (2) [YES/NO] (3)	Remarks (4)
17.	<p><b>Validity of Offer :-</b></p> <p>(a) The validity of the offers should be 90 days (in case of single part tender) from the date of opening of the tenders.</p> <p>(b) The validity of the offers should be 120 days (in case two part tender) from the date of opening of the tenders.</p> <p><b>Note :- Tenders shorter than offer validity mentioned above will not be considered for evaluation.</b></p>		
18.	<p>In case of foreign orders,</p> <p>(a) Please specify whether any Export clearance is required. If it is required please provide End User Certificate format along with offer.</p> <p>(b) Please specify whether any Agency Commission is involved or not. If 'YES' mention the percentage of Agency Commission.</p> <p>[Agency Commission shall be claimed by the Indian Agent through an Invoice. The Agency Commission shall be paid to the Indian Agent in Indian Rupees worked out on the basis of Telegraphic Transfer buying rate of exchange prevailing on the date of placement of the Purchase order/Contract and within 30 days from the date of satisfactory acceptance of the item at our site. Distributors are not eligible for Agency Commission]</p>		
19.	<p><b>Special conditions against Indian Agents submitting quotations in Foreign Currency.</b></p> <p>(a) Foreign Principal's proforma invoice indicating the commission payable to the Indian Agent and nature of after sales service to be rendered by the Indian Agent.</p> <p>(b) Copy of Agency agreement with the Foreign Principal, precise relationship between them and their mutual interest in the business.</p> <p>(c) The enlistment of the Indian Agent with Director-General of Supplies &amp; Disposals under the Compulsory Registration Scheme of Ministry of Finance.</p>		

32

GOVERNMENT OF INDIA  
DEPARTMENT OF SPACE  
**LIQUID PROPULSION SYSTEM CENTRE**  
PURCHASE DIVISION  
VALIAMALA P.O. THIRUVANANTHAPURAM

Tender No :  
Due on :  
Ref. No : .....  
Date : .....

**TENDER FORM**

From :

.....  
.....  
.....

To: The Purchase & Stores Officer,  
Liquid Propulsion Systems Centre  
Valiamala P.O.  
Thiruvananthapuram – 695 547

Dear Sir,

I/We hereby offer to supply the stores detailed below at the price hereunder quoted and agree to hold this offer open till.....I/We shall be bound to supply the stores hereby offered upon the issue of the Purchase Order communicating the acceptance there of on or before the expiry of the last mentioned date. You are at liberty to accept any one or more of the items of stores tendered for or any portion of any one or more of the items of such stores. I/We notwithstanding that the offer in this tender has not been accepted in whole, shall be bound to supply to you such items and such portion or portions of one or more of the items as may be specified in the said Purchase Order communicating the acceptance:

Sl. No.	Description	Quantity	Unit	Rate Rs.	Delivery Date
---------	-------------	----------	------	----------	---------------

.....  
.....

NOTE: All the rates should be given both in figures and words.

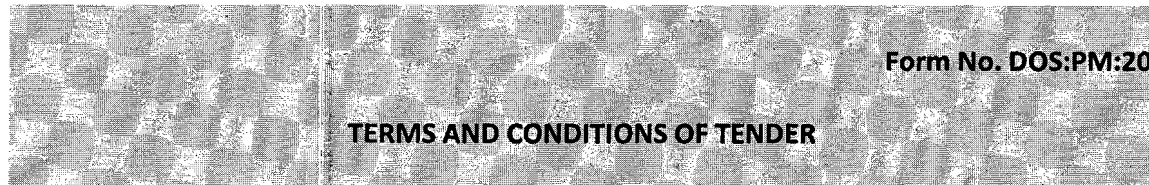
Place at which delivery will be made: .....  
Date by which the ordered items will be supplied:.....

2.I/We have understood the items of the tender annexed to the invitation to tender and have thoroughly examined the specification/drawing and / or pattern quoted or referred to herein and /are fully aware of the nature of the stores required and my/our offer is to supply the stores strictly in accordance with the requirements subject to the terms and conditions stipulated in the enquiry and contained in the purchase order communicating the acceptance of this tender either in whole or in part.

Signature of Tenderer  
Date.....  
(Seal)

31

GOVERNMENT OF INDIA  
DEPARTMENT OF SPACE  
**LIQUID PROPULSIONS SYSTEMS CENTRE**  
PURCHASE AND STORES DIVISION



1. Tenders should be sent in sealed envelopes superscribing the relevant tender No, and the due date of opening. Only one tender should be sent in each envelope.
2. Late tenders and delayed tenders will not be considered.
3. Taxes, legally leviable and intended to be claimed should be distinctly shown separately in the tender.
4. a) Your quotation should be valid for 120 days from the date of opening of the tender or any other period as specified in the tender enquiry. Offer with validity lesser than that specified is liable for exclusion from the procurement process.  
b) Prices are required to be quoted according to the units indicated in the annexed tender form. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.
5. (a) All available technical literature, catalogues and other data in support of the specifications and details of the items should be furnished along with the offer.  
(b) Samples, if called for, should be submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of non-acceptance of tender, the tenderer will have to remove the samples at his own expense.  
(c) Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available the same should also be indicated in your offer.  
(d) **Specifications:** Stores offered should strictly confirm to our specifications. Deviations, if any, should be clearly indicated by the tenderer in his quotation. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotations. Test Certificates, wherever

necessary, should be forwarded along with supplies. Wherever options have been called for in our specifications, the tenderer should address all such options. Wherever specifically mentioned by us, the tenderer could suggest changes to specifications with appropriate response for the same.

6. The purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portions of the quantity offered and the tenderers shall supply the same at the rates quoted.
7. Corrections, if any, must be attested. All amounts shall be indicated both in words as well as in figures. Where there is difference between amount quoted in words and figures, amount quoted in words shall prevail.
8. The tenderer should supply along with his tender, the name of his bankers as well as the latest Income-Tax clearance certificate duly countersigned by the Income-Tax Officer of the Circle concerned under the seal of his office, if required by the Purchaser.
9. The Purchaser reserves the right to place order on the successful tenderer for additional quantity up to 25% of the quantity offered by them at the rates quoted.
10. The authority of the person signing the tender, if called for, should be produced.

#### **TERMS & CONDITIONS OF TENDER**

##### **1. DEFINITIONS:**

- (b) The term 'Purchaser' shall mean the President of India or his successors or assigns.
- (c) The term 'Contractor' shall mean, the person, firm or company with whom or with which the order for the supply of stores is placed and shall be deemed to include the Contractor's successors, representative, heirs, executors and administrators unless excluded by the Contract.
- c) The term 'Stores' shall mean what the Contractor agrees to supply under the Contract as specified in the Purchase Order including erection of plants & machinery and subsequent testing, should such a condition is included in the Purchase Order.
- d) The term 'Purchase Order' shall mean the communication signed on behalf of the Purchaser by an Officer duly authorised intimating the acceptance on behalf of the Purchaser on the terms and conditions mentioned or referred to in the said communication accepting the tender or offer of the Contractor for supply of stores or plant, machinery or equipment or part thereof.

##### **2. PRICES:**

Tender offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotation with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variation/s.

3. **SECURITY DEPOSIT:**

On acceptance of the tender, the Contractor shall, at the option of the Purchaser and within the period specified by him, deposit with him, in cash or in any other form as the Purchaser may determine, security deposit not exceeding ten percent of the value of the Contract as the Purchaser shall specify. If the Contractor is called upon by the Purchaser to deposit, 'Security' and the Contractor fails to provide the security within the period specified, such failure shall constitute a breach of the Contract, and the Purchaser shall be entitled to make other arrangements for the re-purchase of the stores Contracted at the risk of the Contractor in terms of Sub-Clause (ii) and (iii) of clause 10(b) hereof and/or to recover from the Contractor, damages arising from such cancellation.

4. **GUARANTEE & REPLACEMENT:**

- (a) The Contractor shall guarantee that the stores supplied shall comply fully with the specifications laid down, for material, workmanship and performance.
- (b) For a period of twelve months after the acceptance of the stores, if any defects are discovered therein or any defects therein found to have developed under proper use, arising from faulty stores design or workmanship, the Contractor shall remedy such defects at his own cost provided he is called upon to do so within a period of 14 months from the date of acceptance thereof by the purchaser who shall state in writing in what respect the stores or any part thereof are faulty.
- (c) If, in the opinion of the purchaser, it becomes necessary to replace or renew any defective stores such replacement or renewal shall be made by the Contractor free of all costs to the purchaser, provided the notice informing the Contractor of the defect is given by the purchaser in this regard within the said period of 14 months from the date of acceptance thereof.
- (d) Should the Contractor fail to rectify the defects, the purchaser shall have the right to reject or repair or replace at the cost of the Contractor the whole or any portion of the defective stores.
- (e) The decision of the purchaser notwithstanding any prior approval or acceptance or inspection thereof on behalf of the purchaser, as to whether or not the stores supplied by the Contractor are defective or any defect has developed within the said period of 12 months or as to whether the nature of the defects requires renewal or replacement, shall be final, conclusive and binding on the Contractor.
- (f) **Performance Bank Guarantee:** To fulfil guarantee conditions outlined in clause 4 (a) to (e) above, the Contractor shall, at the option of the purchaser, furnish a Bank Guarantee (as prescribed by the purchaser) from a Bank approved by the purchaser for an amount equivalent to 10% of the value of the Contract along with first shipment documents. On the performance and completion of the Contract in all

respects, the Bank Guarantee will be returned to the Contractor without any interest.

- (g) All the replacement stores shall also be guaranteed for a period of 12 months from the date of arrival of the stores at purchaser's site.
- (h) Even while the 12 months guarantee applies to all stores, in case where a greater period is called for by our specifications then such a specification shall apply in such cases the period of 14 months referred to in para 4 (b) & (c) shall be the 'asked for' guarantee period plus two months.

**5. PACKING FORWARDING & INSURANCE:**

The Contractor will be held responsible for the stores being sufficiently and properly packed for transport by rail, road, sea or air to withstand transit hazards and ensure safe arrival at the destination. The packing and marking of packages shall be done by and at the expense of the Contractor. The purchaser will not pay separately for transit insurance, all risks in transit being exclusively of the Contractor and the Purchaser shall pay only for such stores as are actually received in good condition in accordance with the Contract.

**6. DESPATCH:**

The Contractor is responsible for obtaining a clear receipt from the Transport Authorities specifying the goods despatched. The consignment should be despatched with clear Railway Receipt/Lorry Receipt. If sent in any other mode, it shall be at the risk of the Contractor. Purchaser will take no responsibility for short deliveries or wrong supply of goods when the same are booked on 'said to contain' basis. Purchaser shall pay for only such stores as are actually received by them in accordance with the Contract.

**7. TEST CERTIFICATE:**

Wherever required, test certificates should be sent along with the despatch documents.

**8. ACCEPTANCE OF STORES:**

- (a) The stores shall be tendered by the Contractor for inspection at such places as may be specified by the purchaser at the Contractor's own risk, expense and cost.
- (b) It is expressly agreed that the acceptance of the stores Contracted for, is subject to final approval by the purchaser, whose decision shall be final.
- (c) If, in the opinion of the purchaser, all or any of the stores that do not meet the performance or quality requirements specified in the Purchase Order, they may be either rejected or accepted at a price to be fixed by the purchaser and his decision as to rejection and the prices to be fixed shall be final and binding on the Contractor.

20

- (d) If the whole or any part of the stores supplied are rejected in accordance with Clause No. 8 (c) above, the purchaser shall be at liberty, with or without notice to the Contractor, to purchase in the open market at the expense of the Contractor stores meeting the necessary performance and quality Contracted for in place of those rejected, provided that either the purchase, or the agreement to purchase, from another supplier is made within six months from the date of rejection of the stores as aforesaid.

9. **REJECTED STORES:**

Rejected stores will remain at destination at the Contractor's risk and responsibility. If instructions for their disposal are not received from the Contractor within a period of 14 days from the date of receipt of the advice of rejection, the purchaser or his representative has, at his discretion, the right to scrap or sell or consign the rejected stores to Contractor's address at the Contractor's entire risk and expense, freight being payable by the Contractor at actuals.

10. **DELIVERY AND LIQUIDATED DAMAGES:**

- (a) The time for and the date of delivery of the stores stipulated in the Purchase Order shall be deemed to be the essence of the Contract and delivery must be completed on or before the specified dates.
- (b) Should the Contractor fail to deliver the stores or any consignment thereof within the period prescribed for such delivery, the purchaser shall be entitled at his option either.
  - (i) to recover from the Contractor as agreed liquidated damages and not by way of penalty, a sum of 0.5% per week of the price of any stores which the Contractor has failed to deliver as aforesaid or during which the delivery of such store may be in arrears subject to a minimum of 10%, or
  - (ii) to purchase from elsewhere, without notice to the Contractor on the account and at the risk of the Contractor, the stores not delivered or others of a similar description (where others exactly complying with the particulars, are not, in the opinion of the purchaser, readily procurable, such opinion being final) without cancelling the Contract in respect of the consignment (s) not yet due for delivery, or
  - (iii) to cancel the Contract or a portion thereof and if so desired to purchase or authorise the purchase of stores not so delivered or others of a similar description (where others exactly if complying with the particulars are not, in the opinion of the purchaser, readily procurable, such opinion final) at the risk and cost of the Contractor.

In the event of action being taken under sub-clause (ii) & (iii) of clause 10 (b) above, the Contractor shall be liable for any loss which the purchaser may sustain on that account,

provided that the re-purchase or if there is an agreement to re-purchase then such agreement is made within six months from the date of such failure. But the Contractor shall not be entitled to any gain on such re-purchase made against default. The manner and method of such re-purchase shall be at the discretion of the purchaser, whose decision shall be final. It shall not be necessary for the purchaser to serve a notice of such re-purchase on the defaulting Contractor. This right shall be without prejudice to the right of the purchaser to recover damages for breach of Contract by the Contractor.

**11. EXTENSION OF TIME:**

As soon as it is apparent that the Contract dates cannot be adhered to, an application shall be sent by the Contractor to the purchaser. If failure, on the part of the Contractor, to deliver the stores in proper time shall have arisen from any cause which the purchaser may admit as reasonable ground for an extension of the time (and his decision shall be final) he may allow such additional time as he considers it to be justified by circumstances, of the case without prejudice to the purchaser's right to recover liquidated damages under clause 10 thereof.

**12. ERECTION OF PLANT & MACHINERY:**

Wherever erection of a plant or machinery is the responsibility of the Contractor as per the terms of the Contract and in case the Contractor fails to carry out the erection as and when called upon to do so within the period specified by the purchaser, the purchaser shall have the right to get the erection done through any source of his choice. In such an event, the Contractor shall be liable to bear any additional expenditure that the purchaser is liable to incur towards erection. The Contractor shall, however, not be entitled to any gain due to such an action by the purchaser.

**13. PAYMENT:**

Contractor's bill will be passed for payment only after the stores have been received, inspected and accepted by the Purchaser.

**14. MODE OF PAYMENT:**

Normally payment will be made for the accepted stores within 30 days from the date of receipt of the materials.

**15. RECOVERY OF SUM DUE:**

Whenever any claim for the payment of, whether liquidated or not, money arising out of or under this Contract against the Contractor, the purchaser shall be entitled to recover such sum by appropriating in part or whole, the security deposited by the Contractor, if a security is taken against the Contract. In the event of the security being insufficient or if no security has been taken from the Contractor, then the balance or the total sum recoverable as the case may be, shall be deducted from any sum then due or



which at any time thereafter may become due to the Contractor under this or any other Contract with the purchaser. Should this sum be not sufficient to cover the full amount recoverable, the Contractor shall pay to the purchaser on demand the remaining balance due. Similarly, if the purchaser has or makes any claim, whether liquidated or not, against the Contractor under any other Contract with the purchaser, the payment of all moneys payable under the Contract to the Contractor including the security deposit shall be withheld till such claims of the purchaser are finally adjudicated upon and paid by the Contractor.

**16. INDEMNITY:**

The Contractor shall warrant and be deemed to have warranted that all stores supplied against this Contract are free and clean of infringement of any Patent, Copyright or Trademark, and shall at all times indemnify the purchaser against all claims which may be made in respect of the stores for infringement of any right protected by Patent Registration of design or Trade mark and shall take all risk of accidents or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for sufficiency of all means used by him for the fulfilment of the contract.

**17. ARBITRATION:**

In the event of any question, dispute or difference arising under these conditions or any conditions contained in the Purchase Order or in connection with this Contract (except as to any matter the decision of which is specially provided for by these conditions), the same shall be referred to the sole arbitration of the Head of the Purchase office or some other person appointed by him. It will be no objection that the arbitrator is a Government servant, that he had to deal with matter to which the Contract relates or that in the course of his duties as Government servant he has expressed views on all or any other matters in dispute or difference. The award of the arbitrator shall be final and binding on the parties of this Contract.

If the arbitrator be the Head of the Centre/Unit –

- (i) In the event of his being transferred or vacating his office by resignation or otherwise, it shall be lawful for his successor-in-office either to proceed with reference himself, or to appoint another person as arbitrator, or
- (ii) In the event of his being unwilling or unable to act for any reason, it shall be lawful for the Head of the Centre/Unit to appoint another person as arbitrator.

If the arbitrator be a person appointed by the Head of the Purchase Office – In the event of his dying, neglecting or refusing to act or resigning or being unable to act, for any reason, it shall be lawful for the Head of the Centre/Unit either to proceed with the reference himself or appoint another person as arbitrator in place of the outgoing arbitrator.

Subject as aforesaid the Arbitration & Conciliation Act 1996 and the rules thereunder and any statutory modifications thereof for the time being in force shall be deemed to apply to the arbitration proceedings under this Clause. The Arbitrator shall have the power to extend with the consent of the purchaser and the Contractor the time for making and publishing the award. The venue of arbitration shall be the place as purchaser in his absolute discretion may determine. Work under the Contract shall, if reasonably possible, continue during arbitration proceedings.

In the event of any dispute or difference relating to the interpretation and application for the provisions of the Contracts, such dispute or difference shall be referred by either party to Arbitration of one of the Arbitrations in the Department of Public Enterprises. The Arbitration Act 1996 shall not be applicable to arbitration under this clause. The award of the Arbitrator shall be binding upon the parties to the dispute provided however any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law & Justice, Govt. of India. Upon such reference, the dispute shall be decided by the Law Secretary or the Special Secretary / Additional Secretary when so authorized by the Law Secretary, whose decision shall bind the parties finally and conclusively. The parties to the dispute will share equally, the cost of arbitration as intimated by Arbitrator.

**18. COUNTER TERMS AND CONDITION OF SUPPLIERS:**

Where counter terms and conditions printed or cyclostyled conditions have been offered by the supplier, the same shall not be deemed to have been accepted by the Purchaser, unless specific written acceptance thereof is obtained.

**19. SECURITY FOR PURCHASE OF MATERIALS:**

Successful tenderer will have to furnish in the form of a bank guarantee or any other form as called for by the purchaser towards adequate security for the materials and properties provided by the Purchaser for the due execution of the Contract.

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**INSTRUCTIONS TO TENDERERS**

1. The Tenderers should submit quotations in duplicate in a sealed envelope, superscribing the Tender No. and due date of opening and complete in all respects with technical specifications, including pamphlets and catalogues.
2. A Proforma Invoice may also be given which should contain the following information:
  - a) The FOB/FCA value, the C & F value for import by Sea freight / Air freight up to and for air parcel post up to ..... should be separately indicated.
  - b) Agency Commission: The amount of commission included in the price and payable to the Indian Agent of the Contractor shall be paid directly to the Indian Agent by the Purchaser in equivalent Indian Rupees on the basis of an Invoice from him applying T.T. buying rate of exchange ruling on the date of placement of the Purchase Order and which shall not be subject to any further exchange variations. This payment will be released to the Indian Agent immediately after Customs clearance of the goods in India.
  - c) The Contractor shall invoice only for the net amount payable to him, after deducting the amount of Agency Commission included in the invoice which will be paid to the Indian Agent directly by the Purchaser. However, the Contractor's invoice should separately reflect the amount of commission payable to his Indian Agent.
  - d) The earliest delivery period and country of origin of the Stores.
  - e) Banker's name, address, telephone/fax Nos. & e-Mail ID of the Contractor.
  - f) The approximate net and gross weight and dimensions of packages/cases.
  - g) Recommended spares for satisfactory operation for a minimum period of one year.
  - h) Details of any technical service, if required for erection, assembly, commissioning and demonstration.
3. The FOB/FCA and C & F prices quoted should be inclusive of all taxes, levies, duties arising in the tenderer's country.
4. The offer should be valid for a minimum period of 120 days from the due date of opening of the tender.
5. Samples, if called for, should be sent free of all charges.
6. Late and delayed tenders will not be considered. Quotations by cable must be followed by detailed offers.
7. Offers made by Indian Agents on behalf of their Principals, should be supported by the proforma invoice of their Principals.
8. The details of Import Licence will be furnished in the Purchase Order.
9. The authority of person signing the tender, if called for, shall be produced.
10. Instructions / Operation Manual containing all assembly details including wiring diagrams should be sent wherever necessary in duplicate. All documents / correspondence should be in English language only.
11. The Purchaser reserves the right to accept or reject the lowest or any offer in whole or part without assigning any reason.
12. It is expressly agreed that the acceptance of the Stores Contracted for is subject to final

approval in writing by the Purchaser.

13. a) Part shipment is not allowed unless specifically agreed to by us.  
b) As far as possible stores should be despatched by Indian Flag Vessels / Air India through any Agency nominated by us.
14. Inspection / Test Certificate should be provided for the goods after testing it thoroughly at the Contractor's works. If any Inspection by Lloyds or any other testing agency is considered necessary, it shall be arranged by Contractors.
15. Where erection or assembly or commissioning is a part of the Contract, it should be done immediately on notification. The Contractor shall be responsible for any loss/damage sustained due to delay in fulfilling this responsibility.
16. For items having shelf life, those with maximum shelf life should be supplied if order is placed

#### I. TERMS AND CONDITIONS

##### 1. DEFINITIONS:

- a. The term 'Purchaser' shall mean the President of India or his successors or assignees.
- b. The term 'Contractor' shall mean, the person, firm or company with whom or with which the order for the supply of stores is placed and shall be deemed to include the Contractor's Successors, representatives, heirs, executors and administrators unless excluded by the Contract.
- c. The term 'Purchase Order' shall mean the communication signed on behalf of the Purchaser by an officer duly authorized intimating the acceptance on behalf of the Purchaser on the terms and conditions mentioned or referred to in the said communication accepting the Tender or offer of the Contractor for supply of stores of plant, machinery or equipment of part thereof.
- d. The term 'Stores' shall mean what the Contractor agrees to supply under the Contract as specified in the Purchase Order.

##### 2. PRICES:

Tenders offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotations with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variations.

##### 3. TERMS OF PAYMENT:

- 3.1. Being a Department of the Government of India, the normal terms of payment are by Sight Draft. However other terms of payment like establishment of Letter of Credit may be considered by the Purchaser on such terms and conditions as may be agreed upon.
- 3.2. The Sight Draft / Letter of Credit will be operative on presentation of the under mentioned documents:
  - a) Original Bill of Lading / Airway Bill
  - b) Commercially certified invoices describing the stores delivered, quantity, unit rate and their total value, in triplicate. The invoice should indicate the discounts, if any, and Agency Commission separately.
  - c) Packing List showing individual dimensions and weight of packages.
  - d) Country of Origin Certificate in duplicate. e) Test Certificate.
  - e) Declaration by the Seller that the contents in each case are not less than those entered in the invoices and the quality of the Stores are guaranteed as per the specifications asked for by the Purchaser.
  - f) Warrantee and guarantee Certificate/s vide Clause 20 herein below

- 4. **IMPORTANT LICENCE:**  
Reference to Import License No. & date and Contract number & date shall be prominently indicated in all the documents vide para 3.2
- 5. **DEMURRAGE:**  
Supplier shall bear demurrage charges, if any, incurred by the purchaser due to delayed presentation of shipping documents as prescribed in para 3.2 to the bankers within a reasonable time (say within 10-12 days) from the date of bill of lading for sea consignments and within 3-4 days from the date of Air Way Bill for air consignments.
- 6. **ADDRESS OF INDIAN AGENTS:**  
.....  
.....
- 7. **GUARANTEED TIME DELIVERY:**  
The time for and the date of delivery stipulated in the Purchase Order shall be deemed to be the essence of the Contract. Delivery must be completed within the date specified therein.
- 8. **INSPECTION AND ACCEPTANCE TEST:**
  - 8.1. The Purchaser's representatives shall also be entitled at all reasonable times during manufacture to inspect, examine and test on the Contractor's premises the material and workmanship of all stores to be supplied under this Contract and if part of the said stores is being manufactured on other premises, the Contractor shall obtain for the purchaser's representative permission to inspect, examine and test as if the equipment were being manufactured on the Contractor's premises. Such inspection, examination and testing shall not release the Contractor from the obligations under this Contract.
  - 8.2. For tests on the premises of the Contractor or of any of his sub-Contractors, the Contractor shall provide free of cost assistance, labour, material, electricity, fuel and instruments as may be required or as may be reasonably needed by the purchaser's representative to carry out the tests efficiently.
  - 8.3. When the stores have passed the specified test, the purchaser's representative shall furnish a certificate to the effect in writing to the Contractor. The Contractor shall provide copies of the test/s certificates to the purchaser as may be required.
- 9. **MODE OF DESPATCH:**  
Generally, stores should be despatched through Indian Flagged Vessel / Air India or through any other Agency nominated by the purchaser. A copy of the invoice and packing list should invariably be kept inside each of the packages.
- 10. **PORT OF ENTRY:**  
Thiruvananthapuram
- 11. **CONSIGNEE:**  
Purchase & Stores Officer, Stores, (Valiamala, Thiruvananthapuram)
- 12. **SHIPPING MARKS.**  
The mark on the shipping documents such as invoice, bill of lading and on the packages should be as follow:

PURCHASE ORDER NO. ....  
DATED .....

GOVERNMENT OF INDIA  
DEPARTMENT OF SPACE  
LIQUID PROPULSION SYSTEM CENTRE  
DESTINATION: THIRUVANANTHAPURAM / MADRAS /  
BANGALORE  
PORT OF ENTRY: THIRUVANANTHAPURAM / MADRAS /  
BANGALORE

13. INSURANCE OF THE STORES:

The necessity or otherwise of insurance will be as indicated in the Purchase Order.

14. CONTRACTOR'S DEFAULT LIABILITY:

4.1. The purchaser may upon written notice of default to the Contractor terminate the Contract in whole or in part in circumstances detailed hereunder:

- a) If in the judgment of the Purchaser the Contractor fails to make delivery of Stores within the time specified in the Contract/agreement or within the period for which extension has been granted by the Purchaser to the Contractor.
- b) If in the judgment of the Purchaser the Contractor fails to comply with any of the other provisions of this Contract.

15. In the event the Purchaser terminates the Contract in whole or in part as provided in Clause 14 the Purchaser reserves the right to Purchase, upon such terms and in such a manner as he may deem appropriate, stores similar to that terminated and the Contractor shall be liable to the Purchaser for any additional costs for such similar stores and/or for liquidated damages for delay as defined in Clause 19 until such reasonable time as may be required for the final supply of stores.

15.1. If this Contract is terminated as provided in Clause 14 the Purchaser in addition to any other rights provided in this Article, may require the Contractor to transfer title and deliver to the Purchaser under any of the following clauses in the manner and as directed by the Purchaser:

- a) Any completed stores.
- b) Such partially completed stores, drawing, information and Contract rights (hereinafter called manufacturing material) as the Contractor has specifically produced or acquired for the performance of the Contract as terminated. The Purchaser shall pay to the Contractor the Contract price for completed stores delivered to and accepted, by the purchaser and for manufacturing material delivered and accepted.

15.2. In the event the Purchaser does not terminate the Contract as provided in Clause 14, the Contractor shall continue the performance of the Contract in which case he shall be liable to the purchaser for liquidated damages for delays set out in Clause 19 until the stores are accepted.

16. REPLACEMENT:

If the stores or any portion thereof is damaged or lost during transit, the Purchaser shall give notice to the Contractor setting forth particulars of such stores damaged or lost during transit. The replacement of such stores shall be effected by the Contractor within a reasonable time to avoid unnecessary delay in the intended usage of the Stores. In case the purchaser agrees, the price towards replacement items shall be paid by the purchaser on the basis of original price quoted in the tender or as reasonably worked out from the tender.

17. REJECTION :

In the event that any of the stores supplied by the Contractor is found defective in material or workmanship or otherwise not in conformity with the requirements of the Contract specifications, the purchaser shall either reject the stores or request the Contractor, in writing, to rectify the same. The Contractor, on receipt of such notification, shall either rectify or replace the defective stores free of cost to the purchaser. If the Contractor fails to do so, the purchaser may at his option either –

- a) replace or rectify such defective stores and recover the extra cost so involved from the Contractor, or
- b) terminate the Contract for default as provided under clause 14 above, or
- c) Acquire the defective stores at a reduced price considered equitable under the circumstances. The provision of this article shall not prejudice the Purchaser's rights under clause 19.

18. EXTENSION OF TIME:

If the completion of supply of stores is delayed due to reason of *force majeure* such as acts of god, acts of public enemy, acts of Government, fires, floods, epidemics, quarantine restriction, strikes, freight embargoes, etc., the Contractor shall give notice within 15 days to the purchaser in writing of his claim for an extension of time. The purchaser on receipt of such notice after verification, if necessary, may agree to extend the Contract delivery date as may be reasonable but without prejudice to other terms and conditions of the Contract.

19. DELAY IN COMPLETION / LIQUIDATED DAMAGES:

If the Contractor fails to deliver the stores within the time specified in the Contract or any extension thereof, the purchaser shall recover from the Contractor as liquidated damages a sum of one-half of one percent (0.5 percent) of the Contract price of the undelivered stores for each calendar week of delay. The total liquidated damages shall not exceed ten percent (10 percent) of the Contract price of the unit or units so delayed. Stores will be deemed to have been delivered only when all their component parts are also delivered. If certain components are not delivered in time, the stores will be considered as delayed until such time as the missing parts are delivered.

20. GUARANTEE & REPLACEMENT:

- a) The Contractor shall guarantee that the stores supplied shall comply fully with the specifications laid down for material, workmanship and performance.
- b) For a period of twelve months after the acceptance of the stores, if any defects are discovered therein or any defects therein are found to have developed under proper use arising from faulty materials, design or workmanship, the Contractor shall remedy such defects at his own cost provided he is called upon to do so within a period of 14 months from the date of acceptance thereof by the Purchaser who shall state in writing in what respect the stores or any parts thereof are faulty.
- c) If in the opinion of the purchaser it becomes necessary to replace or renew any defective stores, such replacements or renewals shall be made by the Contractor

free of all costs to the purchaser provided the notice informing the Contractor of the defect is given by the purchaser in this regard within the said period of 14 months from the date of acceptance thereof.

- d) Should the Contractor fail to rectify the defects, the purchaser shall have the right to reject or repair or replace at the cost of the Contractor the whole or any portion of the defective stores.
  - e) The decision of the Purchaser, notwithstanding any prior approval or acceptance or inspection thereof on behalf of the purchaser, as to whether or not the stores supplied by the Contractor are defective or any defects has developed within the said period of 12 months or as to whether the nature of the defects requires renewal or replacement shall be final, conclusive and binding on the Contractor.
  - f) To fulfill guarantee conditions outlined in Clause 20 (a) to (e) above, the Contractor shall, at the option of the purchaser, furnish a Bank Guarantee (as prescribed by the purchaser - Bank Guarantee format enclosed) from a Bank approved by the purchaser for an amount equivalent to 10% of the value of the Contract along with first shipment documents. On the performance and completion of the Contract in all respects, the Bank Guarantee will be returned to the Contractor without any interest.
  - g) All the replacement stores shall also be guaranteed for a period of 12 months from the date of arrival of stores at purchaser's site.
  - h) Even while the 12 months guarantee applies to all stores, in case where a greater period is called for by our specifications, then such a specification shall apply, and in such cases, the period of 14 months referred to in Clause 2) (b) and (c) shall be asked for guarantee period plus two months.
21. REQUIREMENT OF ADDITIONAL NUMBERS OF THE STORES/SPARE PARTS ORDERED:  
The Contractor shall also undertake the supply of additional number of items covered by the order as considered necessary by the purchaser at a later date, the actual price to be paid shall be mutually agreed to after negotiations.
22. PACKING:
- a) The Contractor wherever applicable shall pack and crate all stores for sea / air shipment as applicable in a manner suitable for export to a tropical humid climate, in accordance with internationally accepted export practices and in such a manner so as to protect it from damage and deterioration in transit by road, rail or sea for space qualified stores. The Contractor shall be held responsible for all damages due to improper packing.
  - b) The Contractor shall ensure that each box / unit of shipment is legible and properly marked for correct identification. The failure to comply with this requirement shall make the Contractor liable for additional expenses involved.
  - c) The Contractor shall notify the purchaser of the date of shipment from the port of embarkation as well as the expected date of arrival of such shipment at the designated port of arrival.
  - d) The Contractor shall give complete shipment information concerning the weight, size, content of each packages, etc.
  - e) Transshipment of equipment shall not be permitted except with the written permission of the purchaser.
  - f) Apart from the despatch documents negotiated through Bank, the following documents shall also be airtailed to the purchaser within 7 days from the date of shipment by sea



and within 3 days in case of air-consignments:

- Commercial Bill of Lading / Air Way Bill / Post parcel Receipt. (Two non-negotiable copies)
- Invoice (3 copies)
- Packing List (3 copies)
- Test Certificate (3 copies)
- Certificate of Origin.

The Contractor shall also ensure that one copy of the packing list is enclosed in each case

23. ARBITRATION:

If at any time any question, dispute or difference whatsoever shall arise between the purchaser and the Contractor upon or in connection with this Contract, either party may forthwith give to the other notice in writing of the existence of such question, dispute or difference and the same shall be referred to the adjudication of two arbitrators, one to be nominated by purchaser, other by a Contractor and in the event of any difference of opinion, the arbitrators will refer the matter to the umpire. The arbitration shall be conducted in accordance with the rules and procedure for arbitration of the International Chamber of Commerce at Paris. The expenses of the arbitrators and umpire shall be paid as may be determined by them. However, the venue of such arbitration should be in India.

24. LANGUAGE AND MEASURES:

All documents pertaining to the Contract including specification, schedule, notice, correspondence, operating and maintenance instructions, drawings or any other writings shall be written in English language. The metric system of measurement shall be used exclusively in the Contract.

25. INDEMNITY:

The Contractor shall warrant and be deemed to have warranted that all Stores supplied against this Contract are free and clean of infringement of any patent, copyright or trade mark and shall at all times indemnify the purchaser against all claims which may be made in respect of stores for infringement of any right protected by Patent, Registration of design or Trade Mark, and shall take all risk of accident or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for the sufficiency of all the means used by him for the fulfillment of the Contract.

26. COUNTER TERMS AND CONDITIONS OF SUPPLIERS:

Where counter terms and conditions/printed or cyclostyled conditions have been offered by the supplier, the same shall not be deemed to have been accepted by the purchaser unless specific written acceptance thereof is obtained.

27. SECURITY INTEREST:

On each item to be delivered under this Contract, including an item of work in progress in respect of which payments have been made in accordance with the terms of the Contract, purchaser shall have a security interest in such items which shall be deemed to be released only at the time when the applicable deliverable item is finally accepted and delivered to the purchaser in accordance with the terms of the Contract. Such security interest of the purchaser shall constitute a prior charge as against any other charge or interest created in respect of such items by any entity.

28. BANK CHARGES:

While the purchaser shall bear the bank charge payable to his Bankers (State Bank of India), the Contractor shall bear the Bank charges payable to his Bankers including the

cheques towards advising amendment commissions.

29. TRAINING:

The Contractor shall, if required by the purchaser, provide facilities for the practical training of Purchaser's engineering / technical personnel from India and for their active association on the manufacturing processes throughout the manufacturing period of the Contract / stores, number of such personnel to be mutually agreed upon.

30. APPLICABLE LAW:

The Contract shall be interpreted, construed and governed by the laws of India.

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