

GOVT. INDUSTRIAL TRAINING INSTITUTE BALASORE

At- BALASORE P.O./Dist- BALASORE-756001

E-mail: iti.bls@rediffmail.com

Website: www.govtitibalasore.org Tel. No-06782-262077

BID REFERENCE NO-1 / GOVT.ITI.BALASORE / TENDER / 2021-22

Package No. 1,2,3

BIDDING DOCUMENTS

UNDER

NATIONAL COMPETITIVE BIDDING

FOR

PROCUREMENT OF MACHINERY & EQUIPMENT

Bidding Document: Not transferable

GOVT. INDUSTRIAL TRAINING INSTITUTE BALASORE

At- BALASORE P.O./Dist- BALASORE-756001

E-mail: iti.bls@rediffmail.comWebsite: www.govtitibalasore.org Tel. No-06782-262077**Tender Notice No- 441/ GOVT.ITI,BALASORE – 2021-22 Dated 20/03/2021****TENDER FOR SUPPLY, INSTALLATION AND DEMONSTRATION OF
MACHINERY & EQUIPMENT****Bidding Document: Not transferable**

DATE OF COMMENCEMENT OF SALE OF THE TENDER/ DOWN LOAD DATE OF BIDDING DOCUMENTS FROM WEBSITE (INSTITUTE/ DTE&T, ODISHA)	:	11.05.2021 at 11.00 AM
LAST DATE/ TIME FOR SALE OF TENDER / DOWN LOAD DATE OF BIDDING DOCUMENTS FROM WEBSITE (INSTITUTE/ DTE&T, ODISHA)	:	11.06.2021 up to 4.00 PM
LAST DATE/ TIME FOR SUBMISSION OF TENDER (BY REGD.POST/SPEED POST/BY HAND IN THE INSTITUTE TENDER DROP BOX)	:	12.06.2021 up to 11.30 AM
DATE OF OPENING OF BID DOCUMENTS	:	12.06.2021 at 12.30 PM
PLACE OF OPENING OF TENDER AND ADDRESS FOR COMMUNICATION AND RECEIPT OF BID DOCUMENTS	:	GOVT. ITI BALASORE (Odisha)AT/PO/DIST- BALASORE, email – iti.bls@rediffmail.com website: www.govtitibalasore.org
EMD value of different Packages		Package– 1 -3.5% of Bid amount Package– 2 -3.5% of Bid amount Package– 3-3.5% of Bid amount
(Only by A/c Payee Bank Draft in favor of Principal, GOVT.ITI BALASORE payable at Balasore from any Nationalized/ Scheduled Bank.)		

INDEX

SI No	DESCRIPTION	Clause No
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1	SECTION- I	INVITATION FOR BIDS (IFB)	
2	SECTION-II	GENERAL TERMS AND CONDITIONS	
		Document Establishing Bidder's Eligibility & Qualification	1.0
		Document Establishing Goods Eligibility.	2.0
		Technical Bid	3.0
		Price Bid	4.0
		Bid Conditions	5.0
		Language of Bid.	5.5
		Bid Price	5.6
		VAT/GST clearance	5.7
		EMD/Bid Security Deposit :	5.8
		Performance Security.	5.9
		Submission of Bids.	5.10
		Deadline for Submission of Bids	5.11
		Modification & Withdrawal of Bids	5.12
		Bid opening	5.13-5.16
		Clarification of Bids	5.17
		Preliminary Examination	5.18
		Acceptance of the Bid	5.19
		Rejection of the Bid	5.20
		Purchaser's Right to Accept any Bid and to Reject any Bid	5.21
		Evaluation & comparison of Bids	5.22
		Supply Conditions	6.0
		Delivery of Goods	6.1
		Plant and Machineries Demonstration cum Inspection	6.2
		Inspection/ Test	6.3
		Guarantee/Warrantee Period (comprehensive)	6.4
		Up time Guarantee /Warrantee	6.5
		Downtime Penalty Clause	6.6
		Payment Terms	6.7
		Transportation	6.8
		Taxes & duties	6.9
		Incidental Services	6.10
		Period of Validity of Bids	6.11
		Commissioning Period	6.12
		Standards	6.13
		Award Criteria	6.14
		Penalty against late delivery	6.15
		Penalty against non-supply	6.16
		Demonstration	6.17

		Force meajure	6.18
		Rejected items	6.19
		Annual Maintenance Contract	6.20
		Governing Language	7.00
		Applicable Law	8.00
		Notification of Award	9.00
		Signing of Contract	10.00
		Resolution of Disputes by Arbitration	11.00
		Jurisdiction of the Court	12.00
3	SECTION-III	FORMS AND ANNEXURES	
4	SECTION-IV	SCHEDULE OF REQUIREMENTS AND TECHNICAL SPECIFICATIONS	

**SECTION- I
INVITATION FOR BIDS (IFB)**

GOVT. INDUSTRIAL TRAINING INSTITUTE BALASORE

At- BALASORE P.O./Dist- BALASORE-756001

E-mail: iti.bls@rediffmail.com

Website: www.govtitibalasore.org Tel. No-06782-262077

SECTION I: INVITATION FOR BIDS (IFB)

1. INTRODUCTION:

Sealed Bids (properly stitched separately) in two separate covers (**Technical bid and price bid**) are invited by the Principal, GOVT. ITI BALASORE (Odisha) from the manufacturers/authorized distributors/ dealers/Suppliers for supply of Instrument, equipment, machineries etc. of reputed make (National/ International) for GOVT. ITI BHANDARIPOKHARI (Odisha) . A complete set of bidding documents may be purchased by prospective bidders on payment of a non-refundable fee as indicated below in the form of a Demand Draft in favour of Principal, GOVT. ITI BALASORE (Odisha) from any Nationalized/ Scheduled Bank from the office of Principal, GOVT. ITI BALASORE (Odisha) during office hours from **11.00AM** to **4.00PM** on all working days either in person or by post.

The Bidders may download the **Tender Documents** directly from the WEBSITE available at www.govtitibalasore.org and the **Tender cost fee of Rs.500/- per Package(Non-refundable)** by way of separate Demand Draft drawn in favour of **Principal**, GOVT. ITI BALASORE (Odisha) payable at **Balasore** should be enclosed along with the Bid. The Bidders should specifically super-scribe, "Downloaded from the WEBSITE" on the top left corner of the envelope. The Tender cost fee and the EMD amount should be submitted separately in separate demand drafts package wise. In case of any bid amendment and clarification, responsibility lies with the bidders to collect the same from the website before last date of purchase of tender document and the purchaser shall have no responsibility for any delay/ omission on part of the bidder.

TIME SCHEDULE:

a)	Price of bidding document	:	10% per package (Non-refundable)
b)	Date of commencement of Sale of bidding document/ Download date of bidding documents from website: Institute/ DTE&T, Odisha		11.05.2021 at 11.00 AM
c)	Last date for sale of Bidding document/ Availability of tender documents in the website: Institute/ DTE&T, Odisha		11.06.2021 up to 4.00 PM
d)	Last date and time for Receipt of bids (By Regd.Post/Speed Post/ By Hand in the Institute Tender drop box)		12.06.2021 up to 11.30 AM
e)	Time and date of opening of Tender & technical bid		12.06.2021 at 12.30 PM
f)	PLACE OF OPENING OF TENDER AND ADDRESS FOR COMMUNICATION AND RECEIPT OF BID DOCUMENTS		GOVT. ITI BALASORE (Odisha)AT/PO/DIST- BALASORE , email – iti.bls@rediffmail.com website- www.govtitibalasore.org

Principal
Govt. ITI Balasore.

SECTION-II

GENERAL TERMS AND CONDITIONS

GENERAL TERMS & CONDITIONS OF CONTRACT FOR SUPPLY, INSTALLATION AND DEMONSTRATION OF THE INSTRUMENTS, EQUIPMENT, MACHINERIES REQUIRED FOR GOVT.ITI BHANDARIPOKHARI (ODISHA).

Clause No	DESCRIPTION
1	Document Establishing Bidder's Eligibility & Qualification
	The Bidders shall furnish as part of the Bid the following Documents establishing Bidder's eligibility and qualification to perform the contract, to the Purchaser's satisfaction.
1.1	Manufacturer / Authorized Distributor / Dealer having valid license / certificates for the quoted item and the direct Importers holding valid Import License of the product are eligible to participate in the Bid.
1.2	The Bidder whether manufacturer/ distributor/ dealer must have experience of supply and installation of the quoted items in reputed Government Institutions / Public Undertakings / reputed Private Institutions within India / abroad during last preceding 3(Three) years reckoned from the date of bid opening and the details must be submitted as per Annexure- IV along with documentary proof.
1.3	The Bidders shall have to produce document in support of their service associates nearest to Balasore,Odisha; Bhubaneswar, Odisha.
1.4	The Bidder is to submit a certificate from the Banker establishing the financial capability to handle this project.
1.5	Bidder shall have to provide operational Training for Machineries to one Official of ITI Balasore, for each package at Consignee site at least for 7 days whichever is suitable to Purchaser
2	Document Establishing Goods Eligibility.
	The instruments and equipment offered against the schedule of requirement of instruments, equipment and Machineries should be in accordance with the stipulated specifications and of reputed brand as per Annexure-XI .
2.1	The documentary evidence establishing the brand and the model may be in the form of literature, pamphlets, manuals etc.
2.2	Detailed description of instruments and equipment with essential technical and performance characteristics may also be furnished.
2.3	The Bidders should clearly mention in their bid regarding the compatibility of the various equipment or the individual units.
2.4	The quantity shown in the bid can be increased or decreased to any extent depending upon the actual requirement. The number of items to be purchased in each package may vary / may not be also purchased considering the availability of funds and cost of the equipments.
2.5	The instruments and equipment should have testing certificate for its satisfactory functioning.
3	Technical Bid (COVER – A)
	The following document should be submitted after being attested by Notary Public.
3.1	Earnest Money Deposit
3.2	Technical details of the equipment and machineries as per Annexure-XI
3.3	Copy of the manufacturing license/ import license/ Authorized Distributor/ Dealer certificates
3.4	Copy of the authorization from the Manufacturing Company / Authorized Distributor / Dealer. Annexure-III

3.5	GST clearance certificate/current GST filing return & GST Registration certificate.
3.6	Performance/ Market standing certificate as per Annexure-IV establishing that the Bidders have executed supply of such items as mentioned in Schedule of Requirement of instruments and equipment to different Govt. Organizations/ Government PSUs / reputed Private Institutions/ Public Sector.
3.7	Copy of the fresh IT Return & PAN Card.
3.8	Detail name, address, telephone no. fax, e-mail of the firm and of the Director/ Managing Director/ Proprietor of the firm (As per Annexure VI)
3.9	Address, Telephone No., e-mail, Fax of the Branch Office/ Contact Person/ Liaisoning Office in Odisha / Visakhapatnam (A.P.). (As per Annexure VI)
3.10	Power of Attorney/ Authorization to a person for liaisoning and monitoring the business on behalf of the manufacturer / bidder but not entitled to raise the bills.
3.11	Document if any to establish the recognition of the manufacturing unit in respect of ISO or equivalent.
3.12	The original bid book signed & sealed by authorized person in each page as a token of acceptance of all terms and conditions of the tender with original receipt.
3.13	Documentary evidence establishing that the instruments & equipment and ancillary services to be supplied by the Bidders shall confirm to the Bidding Document
3.14	Check list with detail of the document enclosed with page numbered. The document should be serially arranged as per this Annexure VII and should be securely tied and bound.
3.15	Bidders are required to submit Para-wise compliance to each parameter of specification.
3.16	Any deviation in the specification of the item including standard accessories / optional accessories should be marked in bold letters .
3.17	Bid form to be attached as per Annexure-V
3.18	Details of foundation drawing for instruments and equipment, if any, should be provided without which the bid is liable for rejection.
3.19	The details of the service station / service associates nearest to Bhubaneswar(Odisha) shall have to be submitted to qualify in the technical bid.
3.20	willingness to provide operational Training for Machineries to one Official of each consignee at Consignee site at least for 7 days whichever is suitable to Purchaser
4	Price Bid (COVER – B)
4.1	The bid form giving the rates for various instruments & equipment and other items should be submitted in separate sealed cover hereinafter called Cover B (Price Bid) . Price Bid (Cover - B) of the bidders who qualify in Technical Bid (Cover – A) will only be opened.
4.2	The price of the each item shall be quoted as per the prescribed Price Schedule Format at Annexure-I along with price break up of custom duty, Excise Duty, CST, Packing, Forwarding and Handling charges, Insurance charges, ET, Freight up to destination including unloading, GST Registration & GST Clearance/ Current GST filing return, commissioning, incidental service including testing and training with total price per item at FOR destination. The bidders are required to submit the individual price of each instrument(s) and equipment(s) as indicated in the schedule of requirements.
4.3	Each quoted item and all accessories should cover the warranty / guarantee for

	1(one) year from the date of commissioning (Annexure-II).
4.4	The Cover B of the qualifying bidders will be opened at the Office of the Principal, GOVT. ITI BALASORE (Odisha) , on the date and time to be communicated to them after technical evaluation of Cover A by e-Mail .
4.5	The cost of standard accessories and optional accessories shall have to be quoted separately
4.6	The bidders are required to submit the list of the spare parts required for the machine / equipments as well as the list of the dealers/ Distributors of the spare parts nearest to Bhubaneswar, Odisha for its availability.
5	BID CONDITIONS
5.1	The bidder should quote for all the items in a package. He may quote for one package or more packages ,but not part of the package. The scope of Supply as mentioned in the schedule of requirements if not sufficient for full function of the Equipment/Machinery should be intimated in writing before date of opening of Bid.
5.2	The quoted rate shall not vary with the quantum of order placed or destination point.
5.3	A copy of the original bid conditions and the schedules should be signed by the bidder at the bottom of each page with the office seal duly affixed and returned along with the bid. Bid schedule should be duly filled in with an index and page number for the documents, enclosures & EMD etc. Paging must be done for all the documents submitted.
5.4	Bids should be type written or Computerized and every correction/ over writing in the bid should invariably be attested with signature of the bidder with date before submission of the bids to the authorities concerned. No revision of price upward or downward will be allowed once the bid is opened. However the purchaser shall have the right for considering the exchange rate of foreign currencies on verification of documents.
5.5	Language of Bid.
	The Bid prepared by the bidders and all correspondence and document relating to the bid exchanged by the Bidders and the <i>Purchaser</i> , shall be written in the English language. Supporting document and printed literature furnished by the Bidders may be written in another language provided they are accompanied by an accurate translation of the relevant passages in the English language in which case, for purposes of interpretation of the Bid, the English translation shall govern.
5.6	Bid Price
	The contract shall be for the full quantity as described above. Corrections, if any, shall be made by crossing out, initialing, dating and re-writing. All duties, taxes, and other levies payable on the raw materials and components, job contract shall be included in the total price. Current GST filing return/ GST Clearance certificate in connection with the sale shall be shown separately. The rates quoted by the bidders shall be fixed for the duration of the contract and shall not be subject to adjustment on any account. The price shall be quoted in Indian Rupees only.
5.7	GST clearance
	Copies of valid GST clearance Certificate/ Current GST filing return shall be furnished by the Bidders and the originals of the above certificates shall be produced to the purchaser before placement of notification of award if asked for by the Purchaser. Govt. of India GST Act 2017 should be strictly followed.

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5.8	EMD/Bid Security Deposit :
	All bidders are required to submit EMD/ Bid Security of not less than 3.5% of the quoted amount in shape of Demand draft / irrevocable BG(Annexure-IX) drawn in favour of Principal, GOVT.ITI BALASORE (Odisha) only. The bid security shall be in Indian Rupees.
	<p>NOTE: Non- submission of EMD or submission of less EMD than the desired one shall result in rejection of Bid.</p> <p>The bid security is required to protect the Purchaser against the risk of Bidder's conduct which would warrant the security's forfeiture.</p> <p>Unsuccessful bidders' bid security will be discharged after signing of contract with successful bidders.</p> <p>The successful Bidder's bid security will be discharged upon after signing the contract and furnishing the performance security by the Bidders.</p> <p>The bid security may be forfeited if a Bidder withdraws its bid during the period of bid validity and in the case of a successful Bidder, if the Bidder fails to furnish performance security. The EMD / performance Security deposited against other Bids can not be adjusted or considered for this Bid. No interest is payable on EMD / performance Security.</p>
5.9	Performance Security
	The successful Bidders shall furnish Performance Security (Annexure-VIII) within 15 days after the Supplier's receipt of Notification of Award for an amount equivalent to 5% (Five Percent) of the Contract Price in the form of Demand Draft/ irrevocable BG issued by a Nationalized Bank in favour of the Purchaser valid up to 60 (sixty) days after the date of completion of Performance obligations including warranty obligations.
	The Performance Security will be discharged by the Purchaser and returned to the Supplier not later than 60 days following the date of completion of the supplier's

	performance obligations, including the warranty obligations, under the Contract.
	The Performance Security shall be forfeited in case any terms and conditions of the contract are infringed or the bidders fails to make complete supply satisfactorily or complete the work within the delivery / completion period agreed in the contract without prejudice to the purchaser's right to take further remedial actions in terms of the contract and bidding document which formed part of the contract.
5.10	SUBMISSION OF BIDS
	Sealing and Marking of Bids Bid should be submitted in two Bid system containing two parts as detailed below. Sealed Cover-A: Technical Bid. Sealed Cover-B : Price Bid
	Both the sealed envelopes should then be put in one outer cover and each cover should have the following indication: i) Reference No of Bid _____ ii) Bid regarding _____ iii) Due date & time for submission of the Bid _____ iv) Due date & time for opening of the Bid _____ v) Name of the Firm

	<p>NOTE:</p> <p>A. Bids submitted without following two Bid system procedures as mentioned above will be summarily rejected.</p> <p>B. Please Note that prices should not be indicated in the Technical Bid. The Pre-qualification document including EMD/ Performance Security as required in the Bid document should invariable be accompanied with the Technical Bid (Cover A).</p>
	The outer envelope shall indicate the name and address of the bidders to enable the bid to be returned unopened in case it is declared “late”.
	If the cover containing the outer envelope is not sealed and marked as required, Purchaser will assume no responsibility for the bid’s misplacement or premature opening. The above procedure shall be adopted both for the Technical bid and price bid separately.
	Telex, cable, email or facsimile bids will be rejected.
5.11	Deadline for Submission of Bids
	Bids must be received by the Purchaser at the address specified not later than the time and date specified in the Invitation of Bids. In the event of the specified date for the submission of bids being declared a holiday for the Purchaser , the bids will be received up to the appointed time on the next working day.
	The Purchaser may, at its discretion, extend this deadline for submission of bids by amending the bid document, in which case all previous rights and obligations of the purchasers and bidders will remain same till the extended date.
5.12	Modification and Withdrawal of Bids
	No Modification and Withdrawal of Bids is allowed between the interval of time of submission and the last date and time of the bids.
	No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the bidders on the bid form. Withdrawal of a bid during this interval may result in the bidder’s forfeiture of its bid security.
5.13	BID OPENING
5.14	The Purchaser will open all bids, in the presence of bidder’s representatives who choose to attend at 12.30 PM on dated 12.06.2021 at the Office of the Principal, GOVT.ITI BALASORE (Odisha)
5.15	The bidder’s representatives who are present shall sign a register evidencing their attendance. In the event of the specified date of bid opening being declared a holiday for the Purchaser , the bids shall be opened at the appointed time and location on the next working day.
5.16	The bidder’s names, and the presence or absence of the requisite performance security and such other details as the Purchaser , at its discretion, may consider appropriate will be announced at the opening. No bid shall be rejected at bid opening, except for late bids, which shall be returned unopened to the bidders.
5.17	Clarification of Bids
	During evaluation of bids, the Purchaser may, at its discretion, ask the bidders for clarification of its bid. The request for clarification and the response shall be in writing. Unless the purchaser asks for change in price due to the clarifications sought the bidders is not permitted to alter the price furnished.

5.18	Preliminary Examination
	<ul style="list-style-type: none"> <input type="checkbox"/> The Purchaser will examine the bids to determine whether they are complete, <input type="checkbox"/> whether any computational errors have been made <input type="checkbox"/> whether required sureties have been furnished <input type="checkbox"/> whether the document have been properly signed <input type="checkbox"/> whether the bids are generally in order. <input type="checkbox"/> Bids from Representatives, without proper authorization from the manufacturer shall be treated as non-responsive. <input type="checkbox"/> Arithmetical errors will be rectified on the following basis. For example if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If the supplier does not accept the correction of errors, its bid will be rejected.
	<ul style="list-style-type: none"> <input type="checkbox"/> If there is a discrepancy between words and figures, the amount in words will prevail. <input type="checkbox"/> Whether bids received along with certified copies of GST clearance/ Current GST filing return valid up to preceding year issued by competent authority or declaration as per Annexure-V.
	<ul style="list-style-type: none"> <input type="checkbox"/> The Purchaser may waive any minor informality or non-conformity or irregularity in a bid which does not constitute a material deviation, provided such a waiver does not prejudice or affect the relative ranking of any bidders. <input type="checkbox"/> The purchaser's determination of a bids responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence. <input type="checkbox"/> A bid determined as not substantially responsive will be rejected by the Purchaser and may not subsequently be made responsive by the bidders by correction of nonconformity.
5.19	Acceptance of the Bid
	<ul style="list-style-type: none"> <input type="checkbox"/> Bidders submitting bids would be considered who have considered and accepted all terms and conditions. No enquiries, verbal or written, shall be entertained in respect of acceptance or rejection of the bid. <input type="checkbox"/> Genuine equipment and instrument etc. should be supplied. Bidders should indicate the source of supply i.e. name and address of the manufacturers from whom the items are to be sourced. <input type="checkbox"/> Supply of equipment means – Installation and Commissioning, Demonstration as well as Training at site/ Ex-Factory. No separate charges will be paid on this account.
5.20	Rejection of the Bid
	<ul style="list-style-type: none"> <input type="checkbox"/> The Bid document shall be out-rightly rejected under following stipulation and no correspondence will be entertained whatsoever. <input type="checkbox"/> If the Bidders has not furnished the EMD/ BID Security (Annexure-IX) or EMD exemption certificate from competent authority. <input type="checkbox"/> If the Bidders has not submitted the Price as per the prescribed annexure-I. <input type="checkbox"/> If the bid is not supplemented with breakup of standard accessories / Optional accessories & cost of AMC separately for three years after completion of warranty period.

	<ul style="list-style-type: none"> <input type="checkbox"/> Photo copy of the up-to-date valid manufacturing license/ import license (if it is imported) /dealership certificate/Distributor certificate <input type="checkbox"/> If the bidders, whether manufacturer or authorized distributor/ dealer have not supplied the required quantity for qualification as per the eligibility criteria and not submitted the performance statement at Annexure-IV <input type="checkbox"/> If the quoted product of the bidders not confirms to technical specification and standard of workmanship required by the Purchaser. <input type="checkbox"/> If the bidder has not furnished technical details of the equipments and machinery as per Annexure-XI <input type="checkbox"/> If the bidder has not furnished detailed mandatory drawings, Foundation drawings & schedule of supply of items, if required. <input type="checkbox"/> If the bidders has not agreed to give the required performance security. <input type="checkbox"/> If Bidder is not willing to provide operational Training for Machineries to one Official of each consignee at Suppliers Plant or Consignee site at least for 7 days whichever is suitable to Purchaser
5.21	Purchaser's Right to Accept any Bid and to Reject any Bid
	The Purchaser reserves the right to accept or reject any bid and to annul the bidding process and reject all the bids without assigning any reason thereof at any time prior to award of Contract, without thereby incurring any liability to the affected Bidders or Bidders on the grounds of such action of the purchaser. In case no bidder qualifies as per qualifying criteria and standards, purchaser may at his discretion relax qualification criteria for award of contract.
5.22	Evaluation and Comparison of Bids
	The comparison shall be of FOR destination price basis including the price of all costs wherever applicable as well as duties and taxes (but excluding GST) paid or payable on Machineries, instruments & equipment incorporated or to be incorporated in the items including the warrantee/guarantee period from the date of installation.
	<ul style="list-style-type: none"> <input type="checkbox"/> The Purchaser's evaluation of a bid will take into account, in addition to the bid price and the price of incidental services. <input type="checkbox"/> The purpose of bid evaluation is to determine substantially responsive bid with the lowest evaluated cost, but not necessarily the lowest submitted price, which should be recommended for award. <input type="checkbox"/> Evaluation of bids should be made strictly in terms of the provisions in the bid document to ensure compliance with the commercial and technical aspects. <input type="checkbox"/> The past performance of the suppliers will be taken into account while evaluating the bids. <input type="checkbox"/> Cost of the inland transportation, insurance and other costs within the Purchaser's Country incidental to delivery of the goods to their final destination; <input type="checkbox"/> Delivery schedule offered in the bid; <input type="checkbox"/> Deviations in payment schedule from that specified in the General Terms & Conditions of Contract; <input type="checkbox"/> The cost of components, spare parts and service. <input type="checkbox"/> The availability in the Purchaser's country of spare parts and after-sales services for the goods offered in the bid;

	<ul style="list-style-type: none"> <input type="checkbox"/> The projected operating and maintenance costs during the life of the equipment/ goods. <input type="checkbox"/> The performance and productivity of the equipment/ goods offered; <input type="checkbox"/> The quality and adaptability of the equipment/ goods offered. <input type="checkbox"/> Any other point as deemed proper to be incorporated by the evaluation committee. <input type="checkbox"/> Alternative options of offer shall not be allowed. <input type="checkbox"/> Each Bidder shall submit only one quotation. <input type="checkbox"/> The quotation would be evaluated separately for each item <input type="checkbox"/> Sales Tax in connection with sale of goods shall not be taken into account in evaluation. <input type="checkbox"/> Negotiation shall be made with the lowest evaluated bidder. <input type="checkbox"/> Lowest evaluated price shall be taken in to consideration, but not the lowest quoted price. The evaluation shall include the vetting of technical specification, comparison of price as per Govt. of Odisha guideline. The cost of AMC shall be considered separately. <input type="checkbox"/> Willingness to provide operational Training to one Official of each consignee at Suppliers Plant or at consignee site for at least 7 days whichever is suitable to Purchaser
6.0	Supply Conditions
6.1	Delivery of Goods
	The delivery of goods shall be made by the supplier to the Consignee in accordance to the order placed as shall be detailed in the Schedule of requirements & technical specifications.
6.2	Instruments, Equipment & Machinerics Demonstration cum Inspection
	Purchaser reserves the right to ask for demonstration cum inspection of the instruments & equipment where ever applicable.
6.3	Inspection/ Test/Training
	<p>The supplier shall get each equipment inspected in manufacturer's works and submit a test certificate (New & Un used) and also guarantee/warranty certificate that the equipment confirms to laid down specifications.</p> <p>The supplier shall invite the purchaser for pre-dispatch inspection. The Purchaser or his representative shall have the right to inspect/ examine/ test the goods in conformity with the contract awarded/supply order during the production or before dispatch from the manufacturer's premises. Such inspection and clearance will not prejudice the right of the consignee to inspect and test the equipment on receipt at destination.</p> <p>The inspection/examination/ test may be conducted in the premises of the Supplier or at the goods final destination or at the premises of the consignee, as will be decided by the Purchaser.</p> <p>The purchaser's right to inspect/ examine/test & where necessary to reject the instruments & equipment after the arrival of the goods at the final destination, shall in no way be limited or waived by the reason of the goods having been inspected and tested by the manufacturer previously. In case of rejection of the goods at the final destination after inspection and test as stipulated above and in case any inspected/ tested goods fail to confirm to the specification/ working condition, the purchaser may reject them and the supplier shall replace/ repair the same free of cost.</p>

6.4	Warrantee Period (comprehensive)
	The Bidders must quote for a minimum period of 1 (One) year of comprehensive warranty from the date of completion of the satisfactory commissioning as per(Annexure-II). This also includes all accessories related to instruments & equipment quoted for.
6.5	Up time Warrantee/Guarantee
	The Bidders should provide up time guarantee of 95%.
6.6	Downtime Penalty Clause
	During the warranty period, desired uptime of 95% of 365 days (24 hours) if downtime exceeds 5%, penalty in the form of extended warranty, double the number of days or more will be applied for which the equipment goes out of service. In no case the machineries should remain in non-working condition for more than 30 days beyond which a penalty of 0.2% of machine cost will be charged per day. The principals or their agents are required to submit a certificate that they have satisfactory service arrangements and fully trained staff available to support the uptime guarantee.
6.7	Payment Terms
	No advance payment will be made by the Purchaser to the supplier for performance of the contract. 100% of the contract price shall be paid within 15 (fifteen) days after receipt of stock entry certificate from the Consignee, after satisfactory supply, installation, demonstration, Commissioning & training of the goods within due date of delivery.
6.8	Transportation
	The Supplier shall be required to meet all transport and storage expenses until commissioning of the instrument(s) / equipment covered in the contract.
6.9	Taxes and Duties
	The Supplier shall be entirely responsible for payment of all Taxes, Duties etc. incurred until delivery of the contract goods to the Consignee subject to recovery afterwards in the bill as claimed in the Bid offer. GST as applicable is payable, to the suppliers of the State of Odisha if claimed in the Bid offer. C.S.T will be paid to the Suppliers of the outside State other than Odisha, if claimed in the Bid offer. Any revision of CST shall automatically be taken into account. Entry Tax , if paid by the Supplier, at the local (destination head) Corporation/Municipality/NAC is allowed once only on production of money receipt for such payment, if claimed in the Bid offer. Any other statutory levy imposed by the Govt. of India/ Govt. of Odisha from time to time will be considered extra on demand with adequate proof thereof The service tax and the work contract tax shall be levied (Wherever applicable). Income Tax as applicable shall be deducted at source.
6.10	Incidental Services
	The Supplier shall be required to provide any or all of the following services : (The cost should be included in the quoted Price) <ul style="list-style-type: none"> <input type="checkbox"/> Furnishing of detailed literature/pamphlets/ circuit diagram/ operation & maintenance manual / drawings (as applicable) for each appropriate unit of supplied goods. <input type="checkbox"/> Furnishing of tools required for assembly and / or maintenance of the supplied goods. <input type="checkbox"/> Performance or supervision of on-site assembly and the supplied goods.

	<ul style="list-style-type: none"> <input type="checkbox"/> Performance or supervision or maintenance and/ or repair of the supplied goods, for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warranty/ guarantee obligations under the contract. <input type="checkbox"/> Training of the Purchaser's personnel at the Supplier's plant and / or on site, in assembly, start up, operation, maintenance and/ or repair of the supplied goods is Mandatory .A maintenance contract for the goods supplied, if required by the user beyond the warranty period shall be on mutually agreed upon terms between the user and supplier. The cost of such maintenance contract shall not be included in the Bid cost.
6.11	Period of Validity of Bids
	<ul style="list-style-type: none"> <input type="checkbox"/> The bid rates should be kept open/ valid for a period of 90 days from the date the Bids are opened. <input type="checkbox"/> A bid valid for a shorter period i.e less than 90 days shall be rejected, as non-responsive. <input type="checkbox"/> In absence of any indication of the date of validity in the bid, it will be presumed that the offer will remain valid for the minimum period i.e. 90 days as prescribed above. <input type="checkbox"/> In exceptional circumstances the purchaser may solicit the bidders consent for extension of the period of validity. If agreed upon, the bid security so deposited shall also be suitably extended.
6.12	Commissioning Period
	Maximum commissioning period is 15 days from the date of supply.
6.13	Standards
	The Goods supplied under this Contract shall New & Un used confirms to the standards mentioned in the Technical Specifications and when no standard is mentioned, the Goods shall conform to the standards prescribed by the Bureau of Indian Standard (BIS) or equivalent wherever necessary.
6.14	Award Criteria
	<ul style="list-style-type: none"> <input type="checkbox"/> The Purchaser will award the Contract to the successful Bidders whose bid has been determined as the lowest evaluated bid, provided further that the Bidders is determined to be qualified to perform the Contract satisfactorily. <input type="checkbox"/> Quality, durability and adaptability of the instrument(s) / equipment(s) offered suiting to the purpose shall continue to be the overriding factor for selecting the same and determining the lowest evaluated bid. Quantity of requirement may be increased or decreased. <input type="checkbox"/> The purchaser shall award the contract within the period of validity of bids to the Bidders who meets the Bid condition in all aspects has the necessary technical and production capabilities and financial resources whose Bid is substantially responsive to the bid conditions and has offered the lowest evaluated cost. The purchaser shall award the contract for those items, which are either not available in GeM or which are having higher prices in GeM.
6.15	Penalty against late delivery
	<p>If the delivery is not effected in the due date i.e 3 (Three) months from the date of issue of Purchase Order the purchaser will have the right to impose penalty as under.</p> <ol style="list-style-type: none"> a) First extension of 1(one) month or part thereof -@ 2% of the value of balance items; b) b) For second extension for an additional one month-@ 3 % of the value of balance items c) If the bidder fails to execute the order within the extended time schedule as above the firm will be black-listed for two years from the date of issue of purchase order.

6.16	Penalty against Non Supply
	In case of non supply of ITEMS within the due date i.e. within the date of delivery, the Principal, GOVT.ITI BALASORE (Odisha) will have the right to impose penalty, as deemed fit, to resort to risk purchase in full or part thereof at his/her discretion, his/her decision shall be final and binding and the cost shall be recovered for the defaulted party.
6.17	Demonstration
	The bidders may be required to demonstrate the quoted instrument(s) & equipment(s) during the technical evaluation, if required, at the nearest point of installation failing which their bids/offer shall be rejected.
6.18	Force majeure
	The Supplier shall not be liable for forfeiture of its performance security, liquidation damages or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force majeure. For purposes of this Clause "Force majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the Purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes. If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.
6.19	Rejected items
	No payment shall be made for rejected supplied items. Rejected items must be removed by the bidders within two weeks of the date of rejection at their own cost and replace immediately. In case these are not removed these will be auctioned by the purchaser (at the risk and responsibility of the suppliers) without any further notice.
6.20	Annual Maintenance Contract
	The Cost of Annual maintenance contract for next 3 years after warranty period shall be submitted as per the Annexure at I(b) . The after sales service during and after the warranty / guarantee period should be available from companies own engineers.
7.0	Governing Language
	The contract shall be written in English language. All correspondence and document pertaining to the Contract which are exchanged by the parties shall be written in the same language
8.0	Applicable Law
	The Contract shall be interpreted in accordance with the laws of the Union of India.
9.0	Notification of Award
	<ul style="list-style-type: none"> <input type="checkbox"/> Prior to the expiration of the period of validity of the Bid, the Purchaser will notify the successful Bidders in writing by registered letter or by Fax, to be confirmed in writing by registered letter or by speed post, that his bid has been accepted. <input type="checkbox"/> The notification of award will constitute the formation of the Contract. <input type="checkbox"/> Upon the successful Bidder's furnishing of the performance security, the Purchaser will promptly notify each unsuccessful Bidder and will discharge its bid security.

10.0	Signing of Contract
	At the same time as the Purchaser notifies the successful Bidders that his bid has been accepted, the Purchaser will send the Bidders the Contract Form provided in the bidding document(Annexure-X), incorporating all terms and conditions of the agreements between the parties within thirty (21) days of receipt of the Contract Form, the successful Bidders shall sign and date the contract and return it to the Purchaser
11.0	Resolution of Disputes by Arbitration
	The Purchaser and the Supplier should try to resolve the disputes, if any, arising out of the contract, amicably between them, failing which the same shall be referred to the Commissioner Cum Secretary to Government, Skill Development & Technical Education Department, Government of Odisha, Bhubaneswar for adjudication as the sole Arbitrator under the provisions of the Arbitration and Conciliation Act, 1996 whose decision will be final and binding on all the parties to the dispute.
12.0	Jurisdiction of the Court
	The Purchaser and the Supplier shall agree that the competent Court at Balasore/Cuttack shall have the jurisdiction to try and decide anything between the parties and they may approach the Competent Court at Balasore/Cuttack if required at any time.

Principal
Govt. ITI Balasore

SECTION - III

FORMS AND ANNEXURES

ANNEXURE-I(b)

PRICE SCHEDULE (ITEM WISE) - B

PRICE SCHEDULE FOR ANNUAL MAINTNANCE CONTRACT AFTER COMPLETION OF WARRANTY PERIOD.

Sl.No.	Brief description of Goods	Quantity in nos.				3x (Three) Annual Maintenance Contract cost 3 years i.e.
			1	2	3	
			1 st yr.	2 nd yr.	3 rd yr.	
			(a)	(b)	(c)	

** After Completion of warranty period

Note :-

1. In case of discrepancy between unit price and total prices, THE UNIT PRICE shall prevail.
2. The cost of Annual Maintenance Contract (AMC) which includes preventive maintenance including testing & calibration as per technical/ service/ operational manual, labour and spares, after satisfactory completion of warranty period may be quoted for next 3 years on yearly basis for complete equipment and turnkey (if any).
3. The cost of AMC may be quoted along with taxes applicable on the date of bid opening. The taxes to be paid extra, to be specifically stated. In absence of any such stipulation the price will be taken inclusive of such taxes and no claim for the same will be entertained later.
4. Cost of AMC will not be added for Ranking/Evaluation purpose. However, the cost of AMC for lowest evaluated bidder is subject to negotiation.
5. The payment of AMC will be made as per payment terms of the bid document.
6. The uptime warranty and down time penalty shall be as per the biddocument.
7. All software update should be provided free of cost during AMC period.
8. The stipulations in Technical Specification will supersede above provisions.
9. The supplier shall keep sufficient stock of sparse require during Annual comprehensive Maintenance Contract period. In case the spares are required to be imported, it would be the responsibility of the supplier to import and get them custom cleared and pay all necessary duties.

Place :

Date :

Signature of Bidder
Business Address.

WARRANTY MAINTENANCE CONTRACT AGREEMENT.

THIS AGREEMENT made the.....day of, 20____
between the Principal, GOVT.ITI BHANDARIPOKHARI (Odisha) (hereinafter
"the Purchaser") of the one part and
M/s.....
(hereinafter called "the Supplier") of the other part:

WHEREAS the Purchaser invited bids for certain Goods & ancillary services viz, supply and commissioning of the instruments & equipment at ITI Bhandaripokhari including Comprehensive Warranty Maintenance Services and has accepted a bid by the Supplier for the instruments & equipment specified below at the Consignee site including Comprehensive Warranty Maintenance Services for a period of 2 (Two) year from the date of installation & commissioning of the instruments & equipment as per award of Contract No dated

Name of the Equipment & machineries **Qty**

(To be filled in as per details of goods in the award of Contract)

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. Maintenance Services shall consist of Preventive and Corrective maintenance of equipment specified above & will include repair and replacement of parts free of cost.
2. Preventive maintenance, monthly once, which includes:
Check-up to ensure that device connection is proper, cabling is at proper condition etc.
Cleaning of the above instruments & equipments and checking the System Performance.
3. The Supplier is to furnish the tentative schedule of the preventive maintenance of Warranty Maintenance Contract (WMC) to be carried out.
- 4 The parts replaced must be new parts or equivalent in performance to new parts.
5. The Supplier will also provide the same maintenance service in case of the movement of equipment from the place of original installation to a different place or location, if the equipment is shifted by the Purchaser to another place or location at the cost and risk of the purchaser.
6. Any complaint informed through telephone must be acknowledged with a Complaint No. by the Supplier which will be noted by Consignee. All further contact with the Supplier on such complaint will be initiated through that Complaint No. Once rectification done, that No. will be cancelled by both parties. A register is to be maintained by the Supplier where complaints are to be noted along with Complaint No.
7. The maintenance shall normally be done at the earliest.

8. The Service Engineer of the Supplier will be allowed to handle the respective plant & machineries only in presence of the officer in charge at the Consignee site.
9. The Supplier should ensure that maintenance job is not hampered/ delayed due to paucity of spares/inadequate manpower etc.
10. The Supplier should submit the services call report, to the Consignee for each and every service call without fail.
11. In case of delay/ lack of communication, down time will be calculated as mentioned below in WMC Clause.

COMPREHENSIVE WARRANTY MAINTENANCE CONTRACT (CWMC) CLAUSE

Normal response time for repair is 72 hours from the actual time of reporting of the problem to the Supplier.

	Period	Extension of WMC period
Response Time	Above 24 hrs & below 48 hrs.	2 days for delay of each day.
	Above 48 hrs & below 96 hrs	One Week for each day of delay
	Above 96 hrs	Two weeks for each day of delay
Down time	Above 24 hrs & below 48 hrs	Two days for each day of delay
	Above 48 hrs & below 96 hrs	One Week for each day of delay
	Above 96 hrs	Two weeks for each day of delay.

13. The Supplier evaluation data format for the WMC of Consignee systems may be filled up for necessary action.
14. All formats after filled up should be signed at the end of each page by the Supplier.
15. After completion of the work/repair/maintenance, the Purchaser shall issue a certificate of completion to the supplier to that effect.

Signature

Signature

For the Purchaser

For the Supplier

Name:

Name:

Designation:

Designation:

Address:

Address:

Telephone No:

Telephone No:

BID REFERENCE NO- 1 / GOVT. ITI BALASORE/ TENDER / 2021-22
Annexure-III

MANUFACTURES' AUTHORISATION FORM

No. _____ / Date _____ /

To

The Principal, GOVT. ITI BALASORE (Odisha)
Dear Sir, Bid No. _____

We

_____ who
are established and reputable manufacturers of _____
_____ having factories at _____
_____ (Address of
Factory) do thereby authorize
M/s. _____ (Name and address of
Agent) to submit a bid and sign the contract with you against the above
bid.

* No company or firm or individual other than
M/s. _____ are authorized to bid and conclude
the contract in regard to this business against this specific IFB.

We hereby extend our full guaranty and warranty as per general
conditions of contract for the goods and services offered by the above
firm against this bid.

Yours faithfully,

(Signature for and on behalf of Manufacturers)

Note: This letter of authority should be on the letterhead of the manufacturer and should
be signed by a person, competent and having the power of attorney to bind the
manufacturer. It should be included by the Bidders in its bid.

-
- This para should be deleted for simple items where manufacturers sell the product through different stockiest.
 - The Supplier/Managing Director of the Company (if the supplier is a Company) or the Power of Attorney Holder having specific power to sign the contract can only sign the contract/execute the agreement.

BID REFERENCE NO- 1 / GOVT. ITI BALASORE/ TENDER / 2021-22

ANNEXURE-V

BID FORM

DATE:

To

.....
.....

(Complete address of the purchaser).

Ref: - Your Bid Enquiry document No._____dated_____we, the undersigned have examined the above mentioned Tender Enquiry document, including amendment/corrigendum No._____, dated_____(if any), the receipt of which is hereby confirmed. If our bid is accepted, we undertake to supply the instruments & equipment and perform the services as mentioned, in accordance with the delivery schedule specified in the Schedule of Requirements. We further confirm that, if our bid is accepted, we shall provide you with a performance security of required amount in an acceptable form as per Bid Document. We further confirm that, until a formal contract is executed, this bid read with your written acceptance thereof within the validity period shall constitute a binding contract between us. We further understand that you are not bound to accept the lowest or any bid you may receive against your above-referred bid enquiry.

I/ We declare that we possess the valid manufacturing license and/ import license issued by the Competent Authority. I/ We furnish the particulars in this regard in enclosure to this declaration.

I/ We do hereby declare that I/ We have not been de-recognized/ black listed/ convicted by any State Government/ Union Territories/ Government of India for supply of substandard quality items/ part supply/ non-supply.

I/ We agree that the Bid Inviting Authority can forfeit the Earnest Money Deposit and or Security Deposit and blacklist me/ us for a period of 2 (two) years if, any information furnished by us proved to be false at the time of inspection/ verification and not complying with the Bid terms & conditions.

I/ We do hereby declare that I/We will supply the machineries / testing equipment and other items as per the terms, conditions & specifications of the bid document.

I/ We do hereby declare that am/ are not supplying/ quoting the same item at the lower rate quoted in the bid to any Government organization or any other institute.

We confirm that we fully agree to the terms and conditions specified in above mentioned Tender Enquiry document, including amendment/ corrigendum if any.

(Signature with date)
(Name and designation)
Duly authorized to sign bid for and on behalf of
.....
.....

BID REFERENCE NO- 1 / GOVT.ITI BALASORE/ TENDER / 2021-22
ANNEXURE-VI

Details of the bidders

Bid Reference No.

Date of opening

Name and address of the Bidder:

- 01 Name of the bidder
- a) Full postal address
 - b) Full address of the premises
 - c) Telegraphic address
 - d) Telephone number
 - e) Fax number
 - f) E mail:
 - g) PAN No
 - h) TIN No
 - i) GST Registration No.
- 05 Total annual turn-over (value in Rupees)
- 06 Quality control arrangement details
- 07 Test certificate held
- a) Type test
 - b) BIS/ISO certification
 - c) Any other
- 08 Details of staff
- a) Technical
 - b) Skilled
 - c) Unskilled
- 09 Branch Office/ Contact Person/ Liaisoning Office in Odisha.
- a) Address
 - b) Telephone No.
 - c) e-mail,
 - d) Fax of the

Signature and seal of the Bidder

BID REFERENCE NO- 1 / GOVT. ITI BALASORE/ TENDER / 2021-22**CHECK LIST****ANNEXURE-VII**

SI No	DESCRIPTION	Cover		Page No.
1	EMD in the form of DD/BG(Annexure-IX) shall be kept in an envelope	A	Yes/ No	
2	Duly attested photocopy of manufacturing License/ Dealership/ Distributorship Certificates for the product duly approved by the Licensing authority for each and every product quoted	A	Yes/ No	
3	Duly attested photocopy of Import License, if imported	A	Yes/ No	
4	Authorization letter nominating a responsible person/ liaisioning agent of the bidder to transact the business with the Bid Inviting Authority	A	Yes/ No	
5	Performance Report for 3 years (Annexure-IV)	A	Yes/ No	
6	Manufacturers authorization (Annexure-III)	A	Yes/ No	
8	Bid form (Annexure -V)	A	Yes/ No	
9	Details of the Bidders (Annexure -VI)	A	Yes/ No	
10	BIS certificate if any or equivalent. (wherever applicable)	A	Yes/ No	
11	The Bid document signed by the bidder in all pages with office seal.	A	Yes/ No	
12	VAT clearance certificate	A	Yes/ No	
13	Price Schedule- Annexure-I	B	Yes/ No	
14	Detailed Lay out, mandatory drawings and Foundation drawings etc.	A	Yes/ No	
15	Schedule of supply of items with detail Specification including Demonstration, Installation, commissioning & Training.	A	Yes/ No	
16	Technical details of the Machineries & Equipments to be supplied by the bidder (Annexure-XII).	A	Yes/ No	

BID REFERENCE NO- 1 / GOVT. ITI BALASORE / TENDER / 2021-22

ANNEXURE-VIII

PERFORMANCE SECURITY

Notification of Award No. _____

Bank Guarantee No.....

To

The Principal,
Govt. ITI Balasore (Odisha)

WHEREAS.....(name and address of the supplier (hereinafter called "the supplier") has undertaken in pursuance of contract no... dated.....to supply.....(description of goods and service)(hereinafter called" the contract") issued by you (the purchaser) in favour of the supplier.

AND WHEREAS we have agreed to give the supplier been stipulated by you in the said contract that the supplier shall furnish you with a Bank Guarantee by a Nationalized /commercial Bank recognized by you for the sum specified therein as security for compliance with the supplier's performance obligations in accordance with the contract.

AND WHEREAS we have agreed to give the supplier such a bank guarantee;

NOW THEREFORE, we hereby affirm that we are guarantors and responsible to you on behalf of the supplier, up to a sum of Rs.....(Rupees) and we undertake to pay you, upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of guarantee amount, as aforesaid, without your needing to prove or to show grounds or reasons for your demand of the sum specified therein

We hereby waive the necessity of your demanding the said debt from the supplier before presenting us with the demand

We further agree that no change or addition to or other modification of the terms of the contract to be performed thereunder or of any of the contract documents which may be made between you and supplier shall in any way release us from any liability under this guarantee and we hereby waive notice of such change, addition or modification.

This guarantee is valid until..... Day of month of 20.....

Our.....branch at..... (Name & Address of the branch) is liable to pay the guarantee amount depending on the filing of claim and any part thereof under this Bank Guarantee only if you serve upon us at our.....branch a written claim or demand and received by us at our... branch on or before Dt.....

Otherwise bank shall be discharged of all liabilities under this guarantee thereafter.

.....
(Signature of the authorised officer of the Bank)

.....
(Name and Designation of the officer)

Seal, Name & address of the Bank address of the Branch

BID REFERENCE NO- 1 / GOVT. ITI BALASORE / TENDER / 2021-22

ANNEXURE-IX

BID SECURITY FORM

Whereas¹ (hereinafter called "the Bidder") has submitted their bid dated..... (date of submission of bid) for the supply of..... (Name and/or description of the goods) (Hereinafter called "the Bid") against the purchaser's bid enquiry No.....

KNOW ALL PEOPLE by these presents that WE of having our registered office at are bound unto.....(Name of Purchaser) (hereinafter called "the Purchaser") in the sum of _____ for which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents.

Sealed with the Common Seal of the said Bank this _____ day of _____ 20 ____.

THE CONDITIONS of this obligation are:

1. If the Bidder

(a) Withdraws or amends, impairs or derogates from the Bid in any respect with in the period of bid validity of this Bid.

(b) Does not accept the correction of errors in accordance with the ITB; or

2. If the Bidder, having been notified of the acceptance of his bid by the Purchaser during the period of bid validity:

(a) Fails or refuses to execute the Contract Form or

(b) Fails or refuses to furnish the performance security, in accordance with the Instruction to Bidder;

we undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including forty five (45) days after the period of the bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

Our.....branch at..... (Name & Address of the branch) is liable to pay the guaranteed amount depending on the filing of claim and any part thereof under this Bank Guarantee only and only if you serve upon us at our.....branch on or before Dt..... otherwise bank shall be discharged of all liabilities under this guarantee thereafter.

(Signature of the authorised officer of the Bank)

.....
.....

(Name and Designation of the officer)

Seal, Name & address of the Bank address of the Branch

Note: The bank guarantee [submitted by Indian Bidder] should be executed on stamp paper in accordance with stamp Act. The stamp paper should be in the name of executing bank.

BID REFERENCE NO- 1 / GOVT. ITI BALASORE/ TENDER / 2021-22

ANNEXURE-X

CONTRACT FORM

THIS AGREEMENT made theday of....., 20... Between (*Name of purchaser*) of (*Country of Purchaser*) (hereinafter called "the Purchaser") of the one part and (*Name of Supplier*) of (*City and Country of Supplier*) (hereinafter called "the Supplier") of the other part :

WHEREAS the Purchaser is desirous that certain Goods and ancillary services viz., (*Brief Description of Goods and Services*) and has accepted a bid by the Supplier for the supply of those goods and services in the sum of..... (*Contract Price in Words and Figures*) (hereinafter called "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. That the time shall be the essence of the contract and the supplier shall supply the goods in the schedule completely so as to make delivery.....(place) on or before the datefailure to do which will entitle the Governor to rescind the contract immediately.
2. That the goods shall be of the specifications and price mentioned against each. Any variation on inspection will entitle the Governor to refuse the consignments either in whole or in part, as the case may be, the whole, if the part renders it useless.
3. That the goods shall be inspected at(place) in the presence of the officers of both parties duly authorized in that behalf of a day fixed in a notice by either of parties, provided such day is not postponed for more than a period of two months after the date given in the notice. Default by the supplier shall disentitle him to raise any objection subsequently to the result of inspection made by the Governor in his absence and claim any compensation on that account
4. That the supplier shall guarantee durability of the goods for a period of.....from the date of completion of supplies and installation in the case of machineries and any damage, done to the goods in the usual course of use or any deficiency, detected in them subsequent to such completions installation and during the period aforesaid shall be made good to render due service at the cost of the supplier within a period of two months from the date of receipt of the notice in that behalf and no decision shall be taken by the supplier or any person on his behalf as to the defects or deficiency without notice to the Governor failure to do so shall be deemed that supplier has no intention to discharge the obligation and there upon the amount of security, deposited separately or withhold from his bill, shall stand forfeited to the Governor. The supply of goods other than machineries shall be deemed to be complete only after final approval by the officer duly authorized on inspection whose decision shall be final and in case of machineries exactly in the same manner and installation which would include test working for 7(seven)days.
5. The Goods shall be duly packed and insured by the supplier for transit and be dispatched at the risk of the carriers and the Governor shall not responsible for any loss or damage during the transit or any time prior to inspection and approval.

- 6 That the price of goods shall be paid on completion of supplies and installation.
- 7 That any damage or deficiency if not removed during stipulated period by the supplier may be removed by the Governor at his cost to be reimbursed by the Supplier. Any amount payable to the Governor hereunder shall be recovered as public demand under the Orissa Public Demand Recovery Act,1963 and shall bear 6% Interest per annum till certificate for recovery is filed.
- 8 That the supplier shall deposit Rs 5% of contract value towards performance security at the time of acceptance of contract for due performance of the covenants hereof and such money shall be forfeited to the Governor in case of breach of all or any of the covenants.
- 9 That any dispute arising hereunder shall be resolved in following manner
The Purchaser and the Supplier should try to resolve the disputes, if any, arising out of the contract, amicably between them, failing which the same shall be referred to the Commissioner Cum Secretary to Government, Employment, Technical Education & Training Department, Government of Odisha, Bhubaneswar for adjudication as the sole Arbitrator under the provisions of the Arbitration and Conciliation Act, 1996 whose decision will be final and binding on all the parties to the dispute.
- 10 That Sri..... is duly authorized in the order No.....dated by the Governor and Sri on behalf of the company to execute the deed.
- 11 The cause of action hereunder shall always be deemed to arise at Cuttack.
- 12 That stamp duty shall be borne by supplier.

Brief particulars of the goods and services which shall be supplied / provided by the Supplier are as **under:**

SL. NO	BRIEF DESCRIPTION OF GOODS & SERVICES	QUANTITY TO BE SUPPLIED	UNIT PRICE	TOTAL PRICE	DELIVERY TERMS

TOTAL VALUE:

DELIVERY SCHEDULE:

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

Signed, Sealed and Delivered by the said..... (For the Purchaser)

in the presence of:.....

Signed, Sealed and Delivered by the Said.....(For the Supplier)

In the presence of:.....

BID REFERENCE NO- 1 / GOVT. ITI BALASORE/ TENDER / 2021-22

Annexure-XI

**Technical details of the Machineries & Equipments to be supplied
by the bidder**

PACKAGE NO- 1,2,3 .

Sl.No. of the item	Tender specification by GOVT. ITI BLS	Bidders Specification with make and model no (Enclose manufactures catalogue / brochure)	Deviation if any

SECTION- IV

SCHEDULE OF REQUIREMENTS

AND TECHNICAL SPECIFICATIONS

BID REFERENCE NO- 1 / GOVT. ITI BALASORE/ TENDER / 2021-22
Annexure-XII

**ABSTRACT OF PACKAGES FOR REQUIRMENT OF
MACHINERIES/TOOLS/ EQUIPMENT**

Sl No	Package No.	Name of the Package	Total Quantity
1	Package - 1	MMV TRADE Machineries and Equipments.	1 each item.
	Package - 2	FITTER, TRADE Machineries and Equipments.	1 each item.
	Package - 3	ELECTRICIAN, TRADE Machineries and Equipments.	1 each item.

- Quantity may vary (increase or decrease) depending on the final requirement and availability of funds which will be mentioned in the purchase order.

PACKAGE-I

MACHINES & EQUIPMENTS OF MMV TRADE

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
1	Allen Key set of 12 pieces (2 mm to 14 mm) 1.5 mm to 14 mm set of 11 nos	1	Set
2	Caliper inside 15 cm Spring	1	No.
3	Calipers outside 15 cm spring	1	No.
4	Center Punch 10 mm. Dia x 100 mm	1	No.
5	Dividers 15 cm Spring	1	No.
6	Electrician Screw Driver 250 mm	1	No.
7	Hammer ball peen 0.5 kg with handle	1	No.
8	Hands file 20 cm Second cut flat with handle	1	No.
9	Philips Screw Driver set of 5 pieces (100 mm to 300 mm)	1	Set
10	Pliers combination 20 cm	1	No.
11	Screw driver 20 cm X 9 mm Blade	1	No.
12	Screw driver 30 cm X 9 mm Blade	1	No.
13	Scriber 15 cm	1	No.
14	Spanner D.E. set of 12 pieces (6 mm to 32 mm)	1	Set
15	Spanner ring set of 12 metric sizes 6 to 32 mm	1	Set
16	Spanners socket with speed handle, T-bar, ratchet and universal upto 32 mm set of 28 pieces with box	1	Set
17	Steel rule 30 cm inch and metric	1	No.
18	Steel tool box with lock and key (folding type) 400 x 200 x 150 mm	1	No.

19	Wire cutter and stripper 15 cm	1	No.
20	Adjustable spanner (pipe wrench 350 mm) brass	1	No.
21	AC alternator slip ring puller Variable	1	No.

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
22	Air blow gun with standard accessories Trigger operated with interchangeable nozzels	1	No.
23	Ammeter 300 A / 60 A DC with external shunt	1	Set
24	Air ratchet with standard accessories	1	Set
25	Air impact wrench with standard accessories	1	Set
26	Anvil 50 Kg with stand	1	Set
27	Auto Electrical test bench For checking Dynamo, Alternator & Starter. With minimum 2HP AC Motor, Digital Voltmeter & ammeter.	1	Set
28	Battery – charger Capable to charge batterues from 5 AH - 150 AH.	1	No.
29	Blow Lamp 1 Pint Brass	1	No.
30	Belt Tensioner gauge	1	No.
31	Car Jet washer with standard accessories Minimum 3 Phase, 1 HP, 1400 RPM Motor, 3 Reciprocating Plungers with pressure regulator & gauge. 8 m Water hose with pressure adjustable brass nozzle.	1	Set
32	Chain Pulley Block - 3 ton capacity with tripod stand	1	Set
33	Chisel 10 cm flat	1	No.
34	Circlip pliers Expanding and contracting type 15 cm and 20 cm each set of 8 nos	1	Set
35	Cleaning tray 45 x 30 cm	1	No.
36	Compression testing gauge suitable for diesel Engine with standard accessories	1	No.
37	Copper bit soldering iron 0.25 Kg	1	No.
38	Cylinder bore gauge capacity 20 to 160 mm	1	Set
39	Cylinder liner - Dry & wet liner, press fit & slidefit liner	1	No.
40	Depth micrometer 0 - 25 mm	1	No.

41	Dial gauge type 1 Gr. A (complete with clamping devices and with magnetic stand)	1	Set
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SL. NO.	NAME OF THE ITEMS	QTY	UNIT
42	Different type of Engine Bearing model 10 Different types on board	1	No.
43	Different type of piston model 5 Different Types on board	1	No.
44	Drift Punch Copper 15 Cm	1	No.
45	Drill twist 1.5 mm to 15 mm (various sizes) by 0.5 mm	1	Set
46	Electric Soldering Iron 230 V 65 watts 230 V 25 watts set of 2 NOS	1	Set
47	Electric testing screw driver	1	No.
48	Engineer's square 15 cm. Blade	1	No.
49	Engineers stethoscope	1	No.
50	Feeler gauge 20 blades (metric)	1	No.
51	File flat 20 cm bastard with handle	1	No.
52	File half round 20 cm second cut with handle	1	No.
53	File Square 20 cm second cut with handle	1	No.
54	File Square 30 cm round Bastard with handle	1	Set
55	File, triangular 15 cm second cut with handle	1	No.

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
56	Files assorted sizes and types including safe edge file (20 Nos) scope of supply 1-File Flat bastrad 12" 2-File Flat bastrad 10" 3- File Flat bastrad 8" 4-File Flat 2nd cut 12" 5-File Flat 2nd cut 10" 6-File Flat 2nd cut 8" 7-File half round bastard 12" 8-File half round bastard 10" 9-File half round bastard 8" 10-File half round 2nd cut 12" 11-File half round 2nd cut 10" 12-File half round 2nd cut 8" 13-File Hand Bastard 12" 14-File Hand Bastard 10" 15-File square Bastard 10" 16-File Square Bastard 8" 17-File Round Bastard 12"	1	Set
57	Flat File 25 cm second cut with handle	1	No.
58	Flat File 35 cm bastard	1	No.
59	Fuel feed pump for Diesel Hand operated Plunger Type	1	No.
60	Fuel injection pump (Diesel) inline 4 / 6 cylinders RSV Mechanical Pneumatic Governor Type	1	No.
61	Fuel injection pump, VE pump / Distributor fuel rotary pump (DPC) pumps / along with special tools and accessories	1	No.
62	Grease Gun	1	No.
63	Grease Gun heavy duty trolley type 10 kg capacity	1	No.
64	Growler	1	No.
65	Hacksaw frame adjustable 20 - 30 cm	1	No.
66	Hammer Ball Peen 0.75 Kg 800gm	1	No.

67	Hammer Chipping 0.25 Kg	1	No.
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SL. NO.	NAME OF THE ITEMS	QTY	UNIT
68	Hammer copper 1 Kg with handle	1	No.
69	Hammer Mallet	1	No.
70	Hammer Plastic	1	No.
71	Hand operated crimping tool / wire (i) up to 4 mm and (ii) upto 10 mm	1	Set
72	Hand vice upto 37 mm	1	No.
73	Hollow Punch set of seven pieces 6 mm to 15 mm	1	Set
74	Injector – Multi hole type, Pintle type	1	Set
75	Injector testing set (Hand tester)	1	No.
76	Insulated Screw driver 20 cm x 9 mm blade	1	No.
77	Insulated Screw driver 30 cm x 9 mm blade	1	No.
78	Lifting jack screw type 3 ton, 5 Ton & 20 Ton capacity	1	Set
79	Magneto spanner set with 8 spanners	1	No.
80	Magnifying glass 75 mm	1	No.
81	Multimeter digital LCD Display	1	No.
82	Oil can 0.5 / 0.25 liter capacity 1/2 pint	1	No.
83	Automotive Oil pump for dismantling and assembling	1	No.
84	Outside micrometer 0 to 25 mm	1	No.
85	Outside micrometer 25 to 50 mm	1	No.
86	Outside micrometer 50 to 75 mm	1	No.
87	Outside micrometer 75 to 100 mm	1	No.
88	Philips Screw Driver set of 5 pieces (100 mm to 300 mm) pozidrivand trox drive	1	Set
89	Piston ring compressor	1	No.

90	Piston Ring expander and remover	1	No.
91	Piston Ring groove cleaner	1	No.

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
92	Pliers flat nose 15 cm	1	No.
93	Pliers round nose 15 cm	1	No.
94	Pliers side cutting 15 cm	1	No.
95	Portable electric drill Machine upto 10 mm (heavy duty)	1	No.
96	Prick Punch 15 cm	1	No.
97	Punch Letter 4 mm (Number) 5/32"	1	Set
98	Radiator cut section - cross flow Radiator with sectioned side tanks, radiator core	1	Set
99	Radiator cut section - down flow Radiator with sectioned upper & lower tanks, radiator core and cap.	1	Set
100	Radiator pressure cap LMV	1	No.
101	Scraper Triangular 25 cm	1	No.
102	Scriber 15 cm	1	No.
103	Scriber with scribing black universal	1	No.
104	Set of stock and dies – Metric	1	Set
105	Sheet Metal Gauge	1	No.
106	Spanner T. flocks for screwing up and up - screwing inaccessible	1	Set
107	Spanner adjustable 15 cm	1	No.
108	Spark plug spanner 14 mm x 18 mm Size Long bit for Alto / 800	1	No.
109	Starter motor axial type, pre - engagement type & Co - axial type	1	No.
110	Steel measuring tape 10 meter in a case	1	No.
111	Steel rule 15 cm inch and metric	1	No.
112	Straight edge gauge 2 ft.	1	No.
113	Stud extractor set of 3	1	No.
114	Stud remover with socket handle	1	No.

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
115	Surface gauge with dial test indicator plunger type i.e. 0.01 mm	1	Set
116	Tachometer (Counting type)	1	No.
117	Tandem master cylinder with booster	1	No.
118	Thermostat	1	No.
119	Thread pitch gauge metric	1	Set
120	Timing lighter	1	No.
121	Torque wrenches 5 - 35 Nm, 14 - 68 Nm & 50 - 220 Nm set of 3 nos	1	Set
122	Turbocharger cut sectional view Latest WGT type to show turbine, impeller and compressor wheels	1	NO.
123	Tyre pressure gauge with holding nipple	1	No.
124	Universal puller for removing pulleys, bearings	1	No.
125	V' Block 75 x 38 mm pair with Clamps	1	Pair
126	Vacuum gauge to read 0 to 760 mm of Hg	1	No.
127	Valve Lifter	1	No.
128	Valve spring compressor universal	1	No.
129	vernier caliper 0 - 300 mm with least count 0.02 mm	1	No.
130	Vice grip pliers	1	No.
131	Automotive Water pump for dismantling and assembling	1	No.
132	Wire Gauge (metric)	1	No.
133	Vices 12 cm Jaw	1	No.
134	Working model of Air Brake Assembly Two brake drums, vehicular air compressor driven by suitable Electric Motor, air dryer, brake chamber, stop light, different valves, air pressure gauges. With all accessories.	1	Set

135	Alternator assembly used for LMV Alternator (> 50 Amp)	1	No.
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SL. NO.	NAME OF THE ITEMS	QTY	UNIT
136	Carburetor – Solex, Mikunyu for dismantling and assembling Solex, Mikunyu for dismantling and assembling	1	No.
137	Chain Pulley Block - 3 ton capacity with tripod stand 3 ton capacity with tripod Stand	1	Set
138	Cut Section model of Mock layout of a motor car electrical system Working model Wiring with parts and accessories of a car to be arranged according to the electrical circuit of a car. Working of self starter, Alternator, Wiper Motor, Horn, Lighting System, sparks from plug to be shown with Distributor & battery. Should be mounted on suitable table	1	
139	Cut section models of shock absorbers	1	No.
140	Cut section of cross ply and radial tyres	1	No.
141	Cut section working model of automatic transmission Gear Box sectioned to show the internal mechanism of forward and reverse speeds	1	No.
142	Cut section working model of centrifugal clutch assembly. Centrifugal Clutch sectioned to show the internal details	1	No.
143	Cut section working model of Diaphragm clutch assembly. Diaphragm Clutch sectioned to show the internal details	1	No.
144	Cut section working model of Single plate clutch assembly Single plate Clutch sectioned to show the internal details	1	No.
145	Demonstration board of electronic Ignition system, ignition coil With HT coil, HT wires, Spark Plugs, ignition switch, coil, distributor, battery and wiring.	1	No.
146	Demonstration board of MPFI system With injectors, rail, inlet manifold, throttle body, distributor, ECU, purge valve, sensor, crank pulley, fuel tank module.	1	No.
147	Disk brake in working condition with caliper assembly with all parts Exhibiting Brake disc, Caliper assembly, tandem master cylinder, brake hoses, oil bottle, pedal, etc	1	No.

148	Drum brake assembly in Working Condition Brake drum, tandem master cylinder, oil container, brake hose, brake pedal.	1	No.
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SL. NO.	NAME OF THE ITEMS	QTY	UNIT
149	Front axle (Rzeeppa Joint) with stand for Dismantling and assembly Rzeeppa joint of LMV	1	No.
150	Fukll Floating axel and semi floating axel assembly Drum & axel casing should be with aii components in working condition	1	No.
151	Functional / experiment model of different type of sensors. With Different type of sensors like Throttle Position Sensor, Manifold Absolute Pressure Sensor, Engine Coolant Temperature Sensor, Vehicle Speed Sensor, Oxygen Sensor, Crankshaft Position Sensor, Camshaft Position Sensor, Intake Air Temperature Sensor, Mass Air Flow Sensor, Knock Sensor with ECU.	1	No.
152	Steering assembly – and Motor Control Module 1. Rack & pinion - Rack & Pinion with steering wheel, column, tie rod end. 2. Worm & roller - Worm & Roller steering assembly with drop Arm. 3. Recirculating ball - Recirculating Ballsteering with pitman shaft and drop Arm. 4. Power steering - Hydraulic working power steering with steering wheel, column, flow pipe, hydraulic pump, oil reservoir. 5. Electric Assisted Power Steering - Electric Assisted Power Steering with Rack and pinion, Electric Motor and Motor Control Module	1	No.
153	Synchronous Gear box with stand for Dismantling and assembly Gearbox with 5 Forward & 1 Reverse Gear	1	No.
154	Tandem master cylinder with booster Working model	1	No.
155	Tubed tyre of car, trucks & motorcycle	1	Set
156	Tubeless tyre of cars & trucks	1	Set
157	Tyre & split rim wheel assembly	1	No.

158	Working Model of power windows Showing parts like door, glass with motor and its gear arrangement and operating switch.	1	No.
159	Working model of torque converter Model of LMV	1	No.

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
160	Air conditioned CRDI Vehicle in running condition-LMV, New vehicle with CRDI engine, 04 strokes, 04 cylinder, BS-IV, fitted with air condition	1	No.
161	Arbor press hand operated 2 ton capacity	1	No.
162	Automotive exhaust 5 gas analyser (petrol & Diesel) and Diesel Smokemeter (Optional) Exhaust 5 gas analyzer petrol ARAI approved to check CO , CO2, O2 and HC & NO	1	No.
163	Diesel Engine – CRDI - 4 stroke for Dismantling and Assembling with Swiveling Stand Latest 4 Stroke 4 cylinder turbo charged CRDI Engine, 800 - 1600 cc, in running condition, with ECM, BCM, and all sensors, wiring, fuel feed & cooling system & instrument cluster.	1	Set
164	Diesel engine (Running condition) Stationary type single cylinder Single Cylinder, OH valves, fuel tank with handle, fuel feed, water cooling, oil pump.	1	No.
165	Hydraulic jack HI - LIFT type 3 ton capacity, and 5 Ton capacity	1	No.
166	Multi scan tool to scan Engine, ABS & EBD, AT, SRS, Body control and immobilizer Should perform automotive sensor simulation test specially designed to diagnose and simulate vehicle sensor faults for sensors like MAP sensor, intake air temperature sensor, TP sensor etc	1	No.
167	Spring tension tester Manually operated with analogue display.	1	No.
168	Trolley type portable air compressor Belt driven compressor along with accessories	1	No.

169	Working condition of Diesel Engine-CRDI 4 stroke Engine, Assembly with fault simulation board , Latest 4 stroke 4 cylinder turbo charged CRDI Engine, with ECM, BCM and sensors, wiring fuel feed, colling system & instrument cluster.Fault setting bank for minimum 8 sensors and with diagnostic socket & scanner to read the faults. Engine management circuit diagram to be pinte d on tge panel board	1	No.
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SL. NO.	NAME OF THE ITEMS	QTY	UNIT
170	Cut section of 4/6 cylinder diesel engine in moving condition to show movement of internal parts, 6 cylinder diesel engine in working condition to show movement of internal parts	1	No.
171	Diesel Engine six Cylinder in running condition Latest Diesel Engine CRDI 4 Stroke 6 Cylinders, Turbocharged Engine in running condition. All sensors, wiring, fuel feed, cooling system & instrument cluster	1	No.
172	Air bag simulator Driver & Co Driver Air Bags, Seat belts with front seats, crash sensors, air bag ECU, Wiring Harness	1	No.
173	Air conditioning service Unit (Car) Suitable for R134A. Recovery with vacuum pump, automatic drain & stop after recovery.	1	No.
174	Four stroke petrol engine with CNG setup - working condition Latest 4 Stroke 3 / 4 cylinder MPFI Engine in running condition 800 - 1600 cc with ECM, BCM and all sensors, wiring, fuel feed system, cooling system & instrument cluster with CNG / Petrol selection switch on Panel	1	No.
175	Heavy Commercial vehicle Fitted with Latest 06 cylinder CRDI diesel engine with all parts and accessories. (without body on frame)	1	No.
176	MPFI petrol engine with swiveling stand along with special tools for dismantling and assembling Latest 4 Stroke 3 / 4 cylinder MPFI Engine in running condition 800 - 1600 cc with ECM, BCM and all sensors, wiring, fuel feed system, cooling system & instrument cluster	1	No.
177	Petrol Engine (2 - stroke) Motor Cycle / Scooter along with special tools and accessories (Optional)* If not available in market video demonstration may be used to explain working. Cut Section of 2 Stroke 2 W Engine Single Cylinder	1	No.

178	Transfer case with stand for Dismantling and assembly To show the gear mechanism of forward and reverse speeds.	1	No.
179	Tube / tyre vulcanizing machine 220 V, Heater Capacity 400 W x 2 With different types of Die &Mould	1	No.

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
180	Two post car lift capacity 4000 kg hydraulic type with Mechanical Arms locking	1	No.
181	Tyre Changer Machine Motorized Pneumatic Type, Rim clamping facility, and bead breaking facility with air inflating device	1	No.
182	Ultrasonic Injection cleaning equipment Flow analysis & spray pattern test, leak test, auto programming mode, ultrasonic test with timer, Min 500 ML Lit SS Tank with Lid, SS Stand.	1	No.
183	Wheel alignment Machine computerized 3D (optional) Latest machine for four wheel alignment . With connected camera, IR Lighting Source min. 8mm, Reflector metal based, should work in sunlight	1	No.
184	Wheel balancing machine for wheel balancing of LMV. Motor 0.5 HP Shaft Diameter min 38mm. Hardened flange assy. Balancing catch nut of metal	1	No.
185	Working condition of petrol MPFI Engine Assembly with fault simulation board Latest 4 stroke 3/4 cylinder MPFI in running condition, 800-1600 cc with ECM, BCM and all sensors, wiring, fuel feed system, cooling system & instrument cluster with fault setting bank for minimum 6 sensors with diagnostic socket & Scanner to read the faults. Engine management circuit diagram to be printed on the panel board.	1	No.
186	Battery	1	No.
187	Brake fluids	1	No.
188	Chalk, Prussian blue	1	No.
189	Chemical compound for fasteners	1	No.
190	Diesel	1	No.

191	Different type gasket material	1	No.
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SL. NO.	NAME OF THE ITEMS	QTY	UNIT
192	Different type of oil seal	1	No.
193	Drill Twist (assorted) 3mm to 12 mm by 0.5mm	1	Set
194	Emery paper 36 – 60 grit, 80 – 120	1	No.
195	Engine oil & Engine coolant	1	No.
196	Gear oils	1	No.
197	Hacksaw blade (consumable)	1	No.
198	Holder, lamp teakwood boards, plug sockets,	1	No.
199	Hydrometer	1	No.
200	Lapping abrasives	1	No.
201	Petrol	1	No.
202	Power steering oil	1	No.
203	Radiator Coolants	1	No.
204	Safety glasses	1	No.
205	Steel wire Brush 50mmx150mm	1	No.
206	Instructor's table and Chair Steel		
207	Students chairs with writing pads		
208	White board size 1200 mm X 900 mm		
209	Instructors lap top with latest configuration pre - loaded with operating system and MS Office package.		
210	LCD projector with screen		
211	Trainees locker 6½ ' x 3' x 1½'		
212	Drawing board (700 mm x 500 mm) IS : 1444		
213	Mini drafter		
214	Set square celluloid 45° (250 X 1.5 mm)		

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
215	Stool for trainees		
216	Cupboard (big)		
217	White Board 8 ft. x 4 ft.		
218	Trainer's Table		
219	Trainer's Chair		
220	Draughtsman drawing instrument box		
221	Draughtsman table		

PACKAGE-II
MACHINES & EQUIPMENTS OF FITTER
TRADE

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
A. TRAINEES TOOL KIT			
1	Steel Rule with metric & British graduation 150 mm, Stainless steel	1	NO
2	Try Square 150 mm blade	1	NO
3	Caliper inside spring type 150 mm	1	NO
4	Caliper hermaphrodite spring type 150 mm	1	NO
5	Caliper outside spring type 150 mm	1	NO
6	Divider spring type 150 mm	1	NO
7	Scriber 150 mm	1	NO
8	Centre Punch 10 mm and Length - 120 mm	1	NO
9	Screw driver 150 mm insulated flat type	1	NO

10	Chisel cold flat 20 mm X 150 mm High carbon steel	1	NO
11	Hammer ball peen With handle 500 grams (1 lb)	1	NO
12	Hammer ball peen With handle 200 grams (1/2 lb)	1	NO
13	File flat - second cut 250 mm with handle	1	NO
14	File flat smooth 250 mm with handle	1	NO
15	File half round second cut 150 mm with handle	1	NO
16	Hacksaw frame fixed type 300 mm heavy	1	NO
17	Safety goggles	1	NO
18	Dot punch 100 mm	1	NO
19	Steel Rule Graduated both in Metric and English Unit 300 mm Stainless steel	1	NO
20	Straight edge steel 300 mm or above	1	NO
21	Spirit Level metal Type - 2 300 mm Basic Length Accuracy 0.1mm / Meter	1	NO

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
22	Stud Extractor EZY - out Set of 8	1	NO
23	Combination Set 300 mm	1	NO
24	Micrometer outside 0 - 25 mm	1	NO
25	Micrometer outside 25 - 50 mm	1	NO
26	Micrometer outside 50 - 75 mm	1	NO
27	Micrometer inside with extension rods Accuracy 0.01 mm with extension rods up to 150 mm	1	NO
28	Vernier caliper 150 mm	1	NO
29	Vernier height gauges 0 - 300 mm with least count = 0.02 mm	1	NO
30	Vernier bevel protractor Blade with Acute Angle Attachment 300 mm	1	NO
31	Screw pitch gauge Metric 0.25 to 6 mm	1	NO
32	Wire gauge, metric standard	1	NO
33	Surface plate C.I / Granite with Stand and Cover 600 x 600 mm	1	NO
34	Marking table (Mild steel) 900 X 900 X 900 mm	1	NO
35	Universal scribing block 220 mm	1	NO
36	V-Block pair with clamps 150 x 100 x 100 mm	1	NO
37	Angle plate 150 x 150 x 250 mm	1	NO
38	Punch letter set 3 mm 1/8" A to Z	1	SET
39	Punch number set 3 mm 1/8" 0 to 9	1	SET
40	Portable hand drill (Electric) 0 to 13 mm Capacity	1	NO
41	Drill twist straight shank 3 mm to 12 mm by 0.5 mm H.S.S set of 19 nos	1	SET
42	Drill twist Taper shank 8 mm to 20 mm by 0.5 mm H.S.S. set of 25 nos	1	SET

43	Taps and dies complete set in box Whitworth	1	SET
44	Taps and dies complete set 6,7,8 10 & 12 mm set of 5	1	SET

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
45	File knife edge smooth 150 mm with handle	1	NO
46	File feather edge smooth 150 mm with handle	1	NO
47	File triangular smooth 200 mm with handle	1	NO
48	File round second cut 200 mm with handle	1	NO
49	File square second cut 250 mm with handle	1	NO
50	Feeler gauge Gauge Feeler / Thickness - 0.05 mm to 0.3 mm by 0.05 and 0.4 mm to 1 mm by 0.1 mm - 13 leaves	1	SET
51	File triangular second cut 200 mm with handle	1	NO
52	File flat second cut safe edge 300 mm with handle	1	NO
53	File flat bastard 200 mm with handle	1	NO
54	File flat bastard 300 mm with handle	1	NO
55	File Swiss type needle Set of 12, Length = 150 mm	1	SET
56	File half round second cut 250 mm with handle	1	NO
57	File half round bastard 250 mm with handle	1	NO
58	File round bastard 250 mm with handle	1	NO
59	File hand second cut 150 mm with handle	1	NO
60	File card 3" x 5" size, brass or steel wire	1	NO
61	Oil Can 250 ml 1/2 pint	1	NO
62	Pliers combination insulated 150 mm	1	NO
63	Wooden handle forged Soldering Iron copper bit 350 gm	1	NO
64	Blow Lamp 0.5 litre 1 PINT BRASS	1	NO
65	Spanner - Double Ended 6 x 7, 8 x 9, 10 x 11,	1	SET

	12 x 13, 14 x 15, 16 x 17, 18 x 19, 20 x 22		
66	Spanner adjustable 150 mm	1	NO

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
67	Interchangeable ratchet socket set 12 mm driver, sized 10 - 32 mm set of 18 socket & attachments	1	SET
68	Double Ended tubular Box spanner set with Tommy bar 6 - 22 mm set	1	SET
69	Glass magnifying 75 mm	1	NO
70	Clamp toolmaker 5 cm and 7.5 cm set of 2	1	SET
71	Clamp "C" 100 mm	1	NO
72	Clamp "C" 200 mm	1	NO
73	Hand Reamer set (Tapar pin straight flute) Nominal Dia 6,8,10,12,16 MM	1	SET
74	Machine Reamer parallel (Helical flute) 12 - 16 mm set of 5	1	SET
75	Scraper flat 150 mm	1	NO
76	Scraper triangular 150 mm	1	NO
77	Scraper half round 150 mm	1	NO
78	Chisel cold cross cut & diamond point 9 mm X 150 mm	1	SET
79	Chisel cold flat 9 mm X 100 mm	1	NO
80	Chisel cold round noze 9 mm X 150 mm	1	NO
81	Drill chuck with key 12 mm	1	NO
82	Pipe wrench 450 mm	1	NO
83	Pipe vice 100 mm	1	NO
84	Adjustable pipe die set BSP cover pipe size 1" or 3/4"	1	NO
85	Wheel dresser (One for 4 units) Star / Dresser with Holder Length 150 mm, diamond point	1	NO
86	Machine vice - Swivel Base 100 mm	1	NO
87	Machine vice - Swivel Base 125 mm	1	NO

88	Sleeve drill Morse No. 0 - 1, 1 - 2, 2 - 3, 4 - 4, 4 - 5	1	SET
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SL. NO.	NAME OF THE ITEMS	QTY	UNIT
89	Vice bench 150 mm	1	NO
90	Bench working 2400 x 1200 x 900 mm	1	NO
91	Almirah 1800 x 900 x 450 mm	1	NO
92	Lockers with 8 drawers (standard size)	1	NO
93	Metal rack 1820 x 1820 x 450 cm	1	NO
94	Instructor Table	1	NO
95	Instructor Chair	1	NO
96	Black board with easel	1	NO
97	Fire extinguisher (For 4 Units) CO2 type, 3 kg capacity	1	NO
98	Fire buckets	1	NO
99	Machine vice 100 mm	1	NO
100	Wing compass 254 mm or 300 mm	1	NO
101	Hand hammer with handle 1000 gm	1	NO
102	Torque wrench (Standard / Ratchet type) 14 to 68 Nm	1	NO
103	Power tools for fastening Capacity 10 - 18 mm	1	NO
104	Different Profile gauges (Plate type) - For demonstration Metric standard	1	NO
105	Knurling tool (Diamond, straight & Diagonal)	1	NO
106	Indexable boring bar with inserts 1" shank	1	NO
107	Machine maintenance manual for Lathe, Pedestal grinder, Drill machine, Power saw	1	NO
108	Temperature gauge Range 0 - 150°C	1	NO
109	Dowel pin (straight) Dia -1" Length - 4" (Mat : Stainless Steel)	1	NO
110	Standard Tap screws M3, M4, M5, M6, M8, M10, M12, M14, M16	1	SET

111	Lapping plate Dia - 6"	1	NO
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SL. NO.	NAME OF THE ITEMS	QTY	UNIT
11 2	Medium carbon Heat treated alloy steel Metric Studs and bolts along with nuts (for display) of standard length (May be manufactured in - house) M6, M8, M10, M12, M14, M16 (Standard)	1	NO
11 3	Caps screws M6, M8, M10, M12	1	NO
11 4	Drill gauges Letter drill gauge (A to Z), Number drill gauge (1 to 60), Metric drill gauge (1.5 mm to 12.5 mm, 30 holes)	1	SET
11 5	Cast Iron Globe Valve (Flanged type) 150 NB, Class # 150 Flange : ANSI125 - B16.1	1	NO
11 6	C.I. Sluice / Gate valve (flanged type) 150 NB, Class # 150 Flange : ANSI125 - B16.1	1	NO
11 7	Stop cock 25 NB (2-way, Threaded end)	1	NO
11 8	M.S. Pipe 150 NB, Sch.40, ERW, IS:1239	1	NO
11 9	G.I. Pipe 25 mm, Sch. 40, ERW	1	NO
12 0	Slip-on Forged steel Flange 150 NB, ANSI B16.5, Class # 150	1	NO
12 1	Bolt & Nut with washer (May be manufactured in-house) M20 x 2.5 x 90 Long part thread - Hex Head)	1	NO
12 2	Pipe threading die with handle Ratchet type Die head of 1/2", 3/4" and 1"	1	SET
12 3	Jigs & Fixture (sample)-For demonstration (May be manufactured in-house)	1	NO
12 4	M.S Shaft (may be manufactured in house)	1	NO
12 5	Pulleys (for V-belt or Flat belt) to fit on 50 mm dia Shaft with key slot	1	NO
12 6	Steel keys (May be manufactured inhouse) to fit with key slot of shaft & pulley	1	NO
12 7	Damaged old spur gear to fit 50 mm dia Shaft	1	NO

12 8	V-belt and Flat belt to fit on pulley	1	NO
12 9	Packing gasket PTFE gasket roll small size	1	NO
13 0	Washer, clutch, keys, jib, cotter & circlip minimum 25 mm size, carbon steel material	1	NO
13 1	Hollow punch Straight Shank Hollow Punch Sets 5 - 12 mm	1	NO

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
132	Drill Drift (May be manufactured inhouse) 200 mm hardened and black finish	1	NO
133	Bearing different types each type of diameter 25 mm (min.)	1	NO
134	Lifting sling 8 mm Nominal Dia Single leg sling	1	NO
135	Bearing extractor Universal gear puller 2 leg adjustable 4"	1	NO
136	Pulley extractor Universal gear puller 3 leg adjustable 4"	1	NO

C. TOOLS FOR ALLIED TRADE - SHEET

1	Trammel 300 mm	1	NO
2	Pocker	1	NO
3	Prick punch 100 mm	1	NO
4	Mallet Dia 100 mm X 150 mm	1	NO
5	Aviation Snips straight Cut	1	NO
6	Flat headed hammers with handle	1	NO
7	Planishing hammer	1	NO
8	Snip bent Left Cut 250 mm	1	NO
9	Stake hatchet with Leg	1	NO
10	Stake grooving	1	NO

D. MODIFIED LIST OF TOOLS FOR THE 2ND Y

1	Slip Gauge as Johnson metric set 87 Pieces Set	1	SET
2	Gauge snap Go and Not Go 25 to 50 mm by 5 mm, Set of 6 pieces	1	SET
3	Gauge plug Single ended 5 to 55 by 5 mm. Set of 11 pcs.	1	SET
4	Gauge telescopic set 8 - 150 mm	1	NO
5	Dial test indicator on stand 0.01 mm least count	1	NO

6	Sine bar 125 mm	1	NO
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SL. NO.	NAME OF THE ITEMS	QTY	UNIT
7	Dial vernier caliper (Universal type) 0 - 300 mm, LC 0.02 mm	1	NO
8	Screw thread micrometer with interchangeable. Pitch anvils for checking metric threads 60. 0 - 25 mm LC 0.01 mm	1	SET
9	Depth micrometer. 0 - 25mm Accuracy 0.01 mm with standard set of extension rods upto 200 mm	1	NO
10	Digital Vernier caliper 0 - 150 mm with least count 0.02 mm	1	NO
11	Digital Micrometer outside 0 - 25 mm L.C. 0.001 mm	1	NO
12	Comparators Gauge - Dial Indication with Stand and Bracket LC 0.01 mm	1	NO
13	Engineer's try square (knife-edge) 150 mm Blade	1	NO
14	Surface roughness comparison plates N1 - N10 Grade	1	NO
15	Digital Vernier caliper 0 - 200 mm L.C. 0.01 mm (Optional)	1	NO
16	Vernier Bevel protector Range 360 deg, LC. : 5 min (150 mm blade)	1	NO
17	Carbide Wear Block 1 mm - 2 mm	1	SET
18	Lathe tools H.S.S. tipped set of 4	1	SET
19	Lathe tools bit 6 mm x 75 mm HSS	1	NO
20	Lathe tools bit 8 mm x 75 mm HSS	1	NO
21	Lathe tools bit 10 mm x 75 mm HSS	1	NO
22	Arm strong type tool bit holder Right hand	1	NO
23	Arm strong type tool bit holder Left hand	1	NO
24	Arm strong type tool bit holder Straight	1	NO
25	Stilson wrenches 250 mm	1	NO
26	Pipe cutter wheel type 6 mm to 25 mm	1	NO

27	Pipe bender machine spool type with stand manually operated up to 25 mm cold bending	1	NO
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SL. NO.	NAME OF THE ITEMS	QTY	UNIT
28	Adjustable pipe chain tonge to take pipes up to 300 mm	1	NO
29	Adjustable spanner 380 mm long 15"	1	NO

E. GENERAL MACHINERY INSTALLATI

1	SS and SC centre lathe (all geared) with minimum specification, Centre height 150 mm and centre distance 1000 mm along with 3 & 4 jaw chuck, auto feed system, safety guard, taper turning attachment , motorized coolant system, lighting arrangement & standard accessories	1	NO
2	Pillar Type Drilling machine Sensitive 0 - 20 mm cap. with swivel table motorized with chuck & key.	1	NO
3	Drilling machine bench Sensitive 0 - 12 mm cap motorized with chuck and key	1	NO
4	D.E. pedestal Grinding machine with wheels rough and smooth 2 H.P. - 3Phase -415 V, 1440 rpm, 300 dia wheel	1	NO

F. LIST OF ADDITIONAL TOOLS FOR AL

1	Transformer welding set - continuous welding current, with all accessories and electrode holder 60% Duty Cycle with Standard Accessories 300 A, OCV 60 - 100 V	1	NO
2	Welder cable to carry 300 amps with flexible rubber cover (Copper)	1	MTR
3	Lugs for cable	1	NO
4	Earth clamps	1	NO
5	Arc welding table (all metal top) with positioner 1200 X 1200 X 750 mm positioner	1	NO
6	Oxy - acetylene gas welding set equipment with hoses, Oxygen & Acetylene cylinders, regulator and other accessories	1	SET

7	Gas welding table with positioner with Fire Bricks 900 X 600 X 750 mm	1	NO
8	Welding torch tips of different sizes for Oxy - acetylene gas welding To fit nozzle no. 1, 2 & 3	1	NO

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
9	Gas lighter	1	NO
10	Trolley for gas cylinders single	1	NO
11	Chipping hammer	1	NO
12	Gloves (Leather)	1	PAIR
13	Leather apron	1	NO
14	Spindle key for cylinder valve	1	NO
15	Welding torches Nozzles no. 1, 2 & 3	1	NO
16	Welding goggles	1	NO
17	Welding helmet with coloured flame retardant glass	1	NO
18	Tip cleaner	1	NO
1	Compressor unit Suitable for pressure : 8 bar, Delivery 50 lpm (or more), reservoir capacity : 24 liters (or more) 230 v, 50 Hz, with pressure regulator and water separator.	1	NO
2	Pneumatic trainer kit, each consisting of the following matching components and accessories :		
	I). Single acting cylinder Max. stroke length 50 mm, bore dia.20 mm		
	II). Double acting cylinder Max. stroke length 100 mm, bore dia. 20 mm, magnetic type		
	III). 3/2 way valve Manually, actuated, Normally, closed		
	IV). 3/2 way valve Pneumatic, actuated, spring return		
	V). One way flow control valve		
	VI). 5/2 way valve With manually- operated switch		
	VII). 5/2 way valve Pneumatic, actuated, spring return		
	VIII). 5/2 way pneumatic actuated valve Double pilot		
	IX). 3/2 way roller level valve Direct actuation normally closed		

	X). Shuttle valve(OR)
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SL. NO.	NAME OF THE ITEMS	QTY	UNIT
	XI). Two Pressure Valve (AND)	1	NO
	XII). Pressure Gauge 0 - 16 bar		
	XIII). Manifold With self-closing NRV, 6- WAY		
	XIV). Push button station for electrical signal input With 3 illuminated momentary contract switch (1 no + 1 NC) and with 1 illuminated maintained contact switch (1 No + 1 NC) contact load 2 A		
	XV). Relay station With 3 relay each with 4 contact sets (3 No + 1 NC or change over type), 5A		
	XVI). 3/2 way single solenoid valve With LED		
	XVII). 5/2 way single solenoid valve With manual override and LED		
	XVIII). 5/2 way double solenoid valve With manual override and LED		
	XIX). Power supply unit Input voltage 85_265 V AC, output voltage, 2u V DC, output current : max 4.5 A, short- circuit- proof		
	XX). Profile plate, Anodised aluminium 1100 x 700 mm, with carriers mounting frames and accessories (TO 01 sets be fitted on the pneumatic workstation		
3	<p>Pneumatic work station wooden work surface, and one pedestal drawer unit having 5 drawers, each with handles and individual locks, on metallic full panel drawer slide.</p> <p>1. Work table-size (Approx) L-1200 mm x w- 900 mm x H- 900 mm. With four caster wheels including two lockable wheels at the front side.</p> <p>2. Drawer –size (Approx) L-460 mm x w-495 mm x H-158 mm each and overall size of drawer unit. (Approx) L- 470mm x w- 495 x h- 825 mm and</p> <p>3. Drawer slide height (Approx) 85 mm.</p>	1	NO
4	Carrier for mounting components, such as PB & relay boxes	1	NO
5	Cut section model for pneumatic component		

	1. Single acting cylinder		
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SL. NO.	NAME OF THE ITEMS	QTY	UNIT
	2. Double acting cylinder		
	3. 3/2 way valve		
	4. One way flow control valve		
	5. 5/2 way valve		
	6. 3/2 way roller lever valve		
	7. AND Gate		
	8. Pressure Gauge		
	9. 6 way manifold		
	10. 3/2 way single solenoid valve		
	11. 5/2 way double solenoid valve		
6	Hydraulic trainer kit each consisting of the following matching components and accessories	1	NO
	I). Hydraulic power pack With (1) external gear pump having a delivery rate of 2.51 pm. (approx.)@ 1400 rpm operating pressure 60 bar, coupled to a single- phase AC MPTOR (230 V AC) having start capacitor and ON/OFF switch and overload protection, 2. Pressure relief valve and adjustable from 0-60 bar, 3. Oil reservoir, ≥ 5 Litters capacity having sight glass. Drain screw, air filter, and P and T ports.		
	II). Pressure relief valve Pilot- operated		
	III). Drip tray, steel Size 1160 mm x 760		
	IV). Pressure Gauge Glycerin damped, indicated range of 0-100 bar		
	V). Four –way distribution With five ports equipped with a pressure gauge		
	VI). Double acting hydraulic cylinder With a control cam, piston diameter 16 mm, piston rod diameter 10 mm, stroke length 200 mm		
	VII). Suitable weight For vertical loading of hydraulic cylinder		

SL. NO.	NAME OF THE ITEMS	QTY.	UNIT
	VIII). Mounting kit for weight For realizing pulling and pushing load		
	IX). 3/2 way directional control valve With hand lever actuation		
	X). 4/2 way directional control valve With hand lever actuation		
	XI). 4/3 way directional control valve Closed-centre position, with hand lever actuation		
	XII). Non return valve		
	XIII). Pilot operated check valve Pilot to open		
	XIV). One way flow control valve With integrated check valve		
	XV). T- connector with self-sealing coupling nipples (2 nos.) and quick coupling socket (1 no)		
	XVI). Profile plate Anodised aluminium, 100 x 700 mm, with carriers, mounting frames and mounting accessories (to be filled on the Hydraulic work station)		
7	Hydraulic work station Metal work surface, and one pedestal drawer unit having 5 drawers, each with handles and individual locks, on metallic full panel drawer slide. 1. Work table-size (Approx) L-1200 mm x w-900 mm x H- 900 mm. With four caster wheels including two lockable wheels at the front side. 2. Drawer –size (Approx) L-460 mm x w-495 mm x H-158 mm each and overall size of drawer unit. (Approx) L- 470mm x w- 495 x h- 825 mm and 3.Drawer slide height (Approx) 85 mm.	1	NO
8	Cut –section model for hydraulic components.	1	NO
	1. Pressure relief valve		
	2. Pressure Gauge		
	3. Double acting cylinder		
	4. 3/2 way direct directional control valve		

	5. 4/2 way direct directional control valve		
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SL. NO.	NAME OF THE ITEMS	QTY	UNIT
	6. 4/3 way direct directional control valve		
	7. Non return valve		
	8. Pilot operated check valve		

PACKAGE-III

MACHINES & EQUIPMENTS OF ELECTRICIAN TRADE

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
A. TRAINEES TOOL KIT			
1	Measuring Steel Tape 5 meter	1	No.
2	Combination Plier Insulated 200 mm	1	No.
3	Screwdriver Insulated 4mm X 150 mm, Diamond Head	1	No.
4	Screwdriver Insulated 6mm X 150 mm	1	No.
5	Electrician screwdriver thin stem insulated handle 4 mm X 100 mm	1	No.
6	Heavy Duty Screwdriver insulated 5 mm X 200 mm	1	No.
7	Electrician Screwdriver thin stem insulated handle 4 mm X 250 mm	1	No.
8	Punch Centre 9 mm X 150 mm	1	No.
9	Knife Double Bladed Electrician 100 mm	1	No.
10	Neon Tester 500 V	1	No.
11	Steel Rule Graduated both in Metric and English Unit 300 mm with precision of 1/4th mm	1	No.
12	Hammer, cross peen with handle 200 grams	1	No.

13	Hammer, ball peen With handle 500 grams	1	No.
14	Pincer 150 mm	1	No.
15	C- Clamp 200 mm and 100 mm set of 2	1	Set
16	Spanner Adjustable drop forged, SS 150 mm & 300 mm set of 2 nos	1	Set
17	Blow lamp brass 1 pint	1	No.
18	Chisel Cold 25 mm X 200 mm	1	No.
19	Chisel firmer with wooden Handle 6 mm X 200 mm	1	No.
20	Allen Key alloy steel 1.5 - 10 mm (set of 9)	1	Set

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
21	Grease Gun 0.5 ltr. Capacity	1	No.
22	Bradawl	1	No.
23	Pully Puller with 3 legs 150 mm & 300 mm set of 2	1	No.
24	Bearing Puller (inside and outside) 200 mm	1	No.
25	Pipe vice Cast Iron with hardened jaw open type 100 mm	1	No.
26	Scissors blade, SS 200 mm	1	No.
27	Scissors blade, SS 150 mm	1	No.
28	Crimping Tool 1.5 sq mm to 16 sq mm	1	No.
	Crimping Tool 16 sq mm to 95 sq mm	1	No.
29	Wire Cutter and Stripper 150 mm	1	No.
30	Mallet hard wood 0.50 kg	1	No.
31	Hammer Extractor type 340 grams	1	No.
32	Hacksaw frame Adjustable 300 mm	1	No.
33	Try Square 150 mm blade	1	No.
34	Outside Calliper 150 mm spring type	1	No.
35	Inside Calliper 150 mm spring type	1	No.
36	Divider 150 mm spring type	1	No.
37	Pliers long nose insulated 150 mm	1	No.
38	Pliers flat nose insulated 150 mm	1	No.
39	Pliers round nose insulated 100 mm	1	No.
40	Tweezers 150 mm	1	No.
41	Snip Straight and Bent heavy duty 250 mm	1	Set
42	D.E. metric Spanner Double Ended 6 - 32 mm	1	No.

43	Drill hand brace 0-10mm	1	No.
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SL. NO.	NAME OF THE ITEMS	QTY	UNIT
44	Drill S.S. Twist block 2 mm, 5 mm and 6 mm set of 3	1	Set
45	Plane cutters 50 mm X 200 mm	1	No.
46	Smoothing cutters 50 mm X 200 mm	1	No.
47	Gauge, wire imperial stainlees steel marked in SWG & mm Wire Gauge - Metric	1	No.
48	File flat 200 mm 2nd cut with handle	1	No.
49	File half round 200 mm 2nd cut with handle	1	No.
50	File round 200 mm 2nd cut with handle	1	No.
51	File flat rough 150 mm with handle	1	No.
52	File flat bastard 250 mm with handle	1	No.
53	File flat smooth 250 mm with handle	1	No.
54	File Rasp, half round 200 mm bastard with handle	1	No.
55	Copper bit soldering iron. 0.25 kg	1	No.
56	De soldering Gun Heat proof nozzle, PVC type (or De soldering station)	1	No.
57	Hand Vice 50 mm jaw	1	No.
58	Table Vice 100 mm jaw heavy duty	1	No.
59	Oil Can 250 ml 1/2 pint	1	No.
60	Contactora & auxiliary contacts. 3 phase, 415 volt, 25 Amp with 2 NO and 2 NC	1	No.
61	Contactora & auxiliary contacts. 3 phase, 415 volt, 32 Amp with 2 NO and 2 NC	1	No.
62	Limit Switch Limit Switch, Liver operated 2A 500 v 2 - contacts	1	No.
63	Rotary Switch 16 A / 440v	1	No.
	Relay		

a. Cut out Relays Cut out Relay Trainer Kit 16 A, 440 V, Thermal type	1	No.
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SL. NO.	NAME OF THE ITEMS	QTY	UNIT
64	<p>b. Reverse current Reverse Current /Reverse Power Relay This kit consists of 0-5/10A current source, Digital AC Ammeter and Time interval meter to measure the time of relay to trip. Switch to select set and test relay. Indicators for RELAY ON and TRIP ON. Switch to reset the relay and timer.</p>	1	No.
	<p>c. Over current Over Current Relay This kit consists of 0-5/10A current source, Digital AC Ammeter and Time interval meter to measure the time of relay to trip. Switch to select set and test relay. Indicators for RELAY ON and TRIP ON. Switch to reset the relay and timer.</p>	1	No.
	<p>d. Under voltage Under Voltage /Over Voltage Relay This kit consists of 0-160V/500V voltage source, under voltage and over voltage selector switch, Digital AC Voltmeter and Time interval meter to measure the time of relay trip. Switch to select set and test relay. Indicators for RELAY ON and TRIP ON. Switch to reset the relay and timer.</p>	1	No.
65	Pin Type, shackle type, egg type & suspension type insulators including hardware fitting	1	Set
66	Hydrometer	1	No.
67	Hand Drill Machine 0 - 6 mm capacity	1	No.
68	Portable Electric Drill Machine 0 - 12 mm capacity 750 w, 240 v with chuck and key	1	No.
69	Load Bank (Lamp / heater Type) 6 KW, 3 Ph	1	No.
70	Brake Test arrangement with two spring balance rating Brake Test arrangement with two spring balance 0 to 25 kg rating	1	No.
71	Laboratory Type Induction Coil Laboratory type induction coil 6 volt to 800 - 10000 volt	1	No.
72	Out Side Micrometer 0 - 25 mm least count 0.01 mm	1	No.
73	Thermometer Digital 0° C - 150° C	1	No.

74	Series Test Lamp 230 V, 60 W	1	No.
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SL. NO.	NAME OF THE ITEMS	QTY	UNIT
75	Knife Switch DPDT fitted with fuse terminals 16 amp.	1	No.
76	Knife Switch TPDT fitted with fuse terminals 16 Amp	1	No.
77	Miniature Circuit Breaker 16 A	1	No.
78	Earth Plate 60 cm X 60 cm X 3.15 mm Copper Plate	1	No.
	Earth Plate 60 cm X 60 cm X 6 mm GI Plate	1	No.
79	Earth Electrode Primary Electrode 2100 x 28 x 3.25 mm Secondary Cu Strip 20 x 5 mm	1	No.
80	MCCB 100 Amps, Triple pole	1	No.
81	RCCB 25 Amps, double pole, IΔn 30 mA	1	No.
82	Fuses HRC, Glass, Rewire Type	1	No.
83	Rheostat (Sliding type) 0 - 25 Ohm, 2 Amp 0 - 300 Ohm, 2 Amp 0 - 1 Ohm, 10 Amp, 0 - 10 Ohm, 5 Amp set of 4 nos	1	Set
84	Capacitors Electrolytic Ceramic Polyester film Variable Dual run	1	No.
85	Various Electronic components Resistors, Diode, Transistor, UJT, FET, SCR, DIAC, TRAIC, IGBT, Small transformer etc.	1	No.
86	Various Lamps Halogen Incandescent Lamp Fluorescent tube	1	No.
87	Plug socket Piano Switch Lamp Holder 230 V, 5 A	1	Set

88	Cables: Twisted Pair Non-Metallic Sheathed Cable Underground Feeder Cable Ribbon Cable Metallic Sheathed Cable Multi-Conductor Cable Coaxial Cable Direct-Buried Cable 1 mtr each	1	Mtr.
89	Bus bar with brackets 1 mtr	1	No.
90	Rubber mat 2' x 4' x 1"	1	No.

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
91	Electrician Helmet Yellow Colour	1	No.
92	RCC Pole with accessories (MS angle iron, 'C' clamp, stay insulator etc.) and materials 6 Mtr	1	No.
93	Safety Belt Standard quality	1	Set
94	Ohm Meter; Series Type & Shunt Type, portable box type series type 50 / 2000 - ohm analog, Shunt Type, 50/2000-ohm analog	1	Set
95	Digital Multi Meter DC 200 mv - 1000 v, 0 - 10 A & AC 200 mv - 750 v, 0 - 10 A, resistance 0 - 20 MΩ and 3 1/2 digit	1	No.
96	A.C. Voltmeter M.I. analog, portable box type housed in Bakelite case Multi range 75 V - 150V - 300V - 600V set of 2 nos	1	Set
97	Milli Voltmeter centre zero analog, portable box type housed in Bakelite case 100 - 0 - 100 mV	1	No.
98	Ammeter MC analog, portable box type housed in Bakelite case 0 - 500 Ma	1	No.
	Ammeter MC analog, portable box type housed in Bakelite case 0 - 5 A	1	No.
	Ammeter MC analog, portable box type housed in Bakelite Case 0 - 25 A	1	No.
99	AC Ammeter MI, analog, portable box type housed in Bakelite case 0 - 1 A	1	No.
	AC Ammeter MI, analog, portable box type housed in Bakelite case 0 - 5 A	1	No.
	AC Ammeter MI, analog, portable box type housed in Bakelite case 0 - 25 A	1	No.
100	Kilo Wattmeter Analog 0 - 1.5 - 3 KW, pressure coil rating - 240 v / 440v, current rating - 5A / 10A Analoge, portable type Housed in Bakelite case	1	No.
101	Digital Wattmeter 230 V, 1 KW, 50 Hz Portable	1	No.
102	A.C. Energy Meter Single Phase, 10 A, 240 V digital type	1	No.

103	A.C. Energy Meter Three Phase, 15 A , 440 V digital type	1	No.
104	Power Factor Meter Digital 440 V, 20 A, Three Phase portable box type	1	No.
105	Frequency Meter 45 to 55 Hz	1	No.
106	Magnetic Flux Meter 0 - 500 tesla	1	No.

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
107	Lux meter lux meter LCD read out 0.05 to 7000 lumens with battery.	1	No.
108	Tachometer Analog Type - 10000 RPM	1	No.
109	Tachometer Digital Photo Sensor Type - 10000 RPM	1	No.
110	Tong Tester / Clamp Meter 0 - 100 A (Digital Type)	1	No.
111	Megger Analog - 500 V	1	No.
112	3- point D.C. Starter For 2.5 KW DC motor	1	No.
113	4- point D.C. Starter For 2.5 KW DC motor	1	No.
114	Wheat Stone Bridge with galvanometer and battery	1	No.
115	Single Phase Variable AutoTransformer 0 - 270 V, 10 Amp (Air cooled)	1	No.
116	Phase Sequence Indicator 3 Phase, 415 V	1	No.
117	Growler 230 V, 50 Hz, Single Phase, Adjustable jaws, Testing armature with ampere meter and testing probes.	1	No.
118	AC Starters: -		
	a. Resistance type starter For A.C Motors of 2 to 5 H.P.	1	No.
	b. Direct online Starter For A.C Motors of 2 to 5 H.P.	1	No.
	c. Star Delta Starter- Manual For A.C Motors of 2 to 5 H.P.	1	No.
	d. Star Delta Starter – Semi automatic For A.C Motors of 2 to 5 H.P.	1	No.
	e. Star Delta Starter – Fully automatic For A.C Motors of 2 to 5 H.P.	1	No.
	f. Star Delta Starter - Soft starter For A.C Motors of 2 to 5 H.P.	1	No.
	g. Auto Transformer type For A.C Motors of 2 to 5 H.P.	1	No.
119	Oscilloscope Dual Trace 30 MHz	1	No.
120	Function Generator 2 to 200 KHz, Sine, Square,	1	No.

	Triangular 220 V, 50 Hz, Single Phase		
121	Soldering Iron 25 - Watt, 65 Watt and 120 - Watt, 230 Volt Set of 3	1	Set
122	Temperature controlled Soldering Iron 50 - Watt, 230 Volt	1	No.

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
123	Discrete Component Trainer Discrete Component (for diode and transistor circuit) with regulated power supply +5, 0 - 5 V, +12, 0 - 12 V	1	No.
124	Linear I.C. Trainer Linear I.C. Trainer with regulated power supply 1.2 V to 15 V PIC socket 16 pin and 20 pins with bread board	1	No.
125	Digital I.C. Trainer Digital I.C. Trainer 7 segment display and bread board	1	No.
126	Domestic Appliances		
	a. Electric Induction plate 2000 Watt, 240 V	1	No.
	b. Electric Kettle 1500 Watts, 240 V	1	No.
	c. Electric Iron Automatic - 750 W, 240 V	1	No.
	d. Immersion Heater 1500 Watt, 240 V	1	No.
	e. A.C. Ceiling Fan and AC Table Fan 68 - Watt, 230 V	1	No.
	f. Geyser (Storage type) 10 litre	1	No.
	g. Mixture & Grinder 750 W, 240 V	1	No.
	h. Washing Machine Semi - Automatic 6.5 Kg,	1	No.
	i. Motor Pump set 1 HP, 1 Phase, 240 V	1	No.
127	Oil Testing Kit Oil Testing Kit 230 V, single phase 50 Hz 60 VA output 0 - 60 KV Variable	1	No.
128	Inverter with Battery 1 KVA with 12 V Battery input 12 volt Dc, output 220 volt AC 150 A	1	No.
129	Voltage Stabilizer AC Input - 150 - 250 V, 600 VA AC Output - 240 V, 10 A	1	No.
130	DC Power Supply 0 - 30 V, 5 A	1	No.
131	Battery Charger 0 - 6 - 9 - 12 - 24 - 48 V, 30 amp	1	No.

132	Current Transformer 415 V, 50 Hz, CT Ratio 25 / 5 A, 5VA	1	No.
133	Potential Transformer 415 V, 50 Hz, PT Ratio, 440 V / 110 V, 10 VA	1	No.
134	Solar panel with Battery 18 Watt	1	No.

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
135	Pentium IV Computer or latest 2.8 GHz & above, 1 GB RAM, 80 GB HDD, DVD Combo Drive, 19 / 21" Monitor, optical scroll mouse, multimedia keyboard, 32 bit LAN card with UPP port, necessary Drivers, etc. OR (Latest Version)	1	No.
136	Ink jet / Laser printer	1	No.
137	D.C shunt Generator with control panel, DC - Shunt Generator of 2.5 KW, 220 V DC with 5 HP, 451 V, 3-Ph, Sq. Cage Induction Motor Star Delta Starter (Manual type) Field Regulator for Gen.600Ω X 600W PANEL for performing experiment on Shunt Generator. Consisting of : AC- Voltmeter (0-500V), AC- Ammeter (0-5/10A), DC-Voltmeter(0- 300V), DC-Ammeter (0-10A) Input and Out put Terminals, Indication Lamps, MCB, HRC Fuse, etc. incorporated to a Bakelite sheet with proper wiring and fitted to an angle frame of suitable size.	1	Set
138	Motor-Generator (AC to DC) MG- Set consisting of Squirrel Cage Induction Motor of 7HP, 400Volts, 50cycles, 3-phase directly coupled with DC Shunt Generator of 5KW, 440V DC SPDP and foot mounted type Star Delta Starter for the above Motor Field Regulator for Gen.600Ω X 600W PANEL for performing experiment on Shunt Generator. Consisting of : AC - Voltmeter (0-500V), AC- Ammeter (0-15A), DC-Voltmeter(0- 500V), DC-Ammeter (0-15A) Input and Out put Terminals, Indication Lamps, MCB, HRC Fuse, etc. incorporated to a Bakelite sheet with proper wiring and fitted to an angle frame of suitable size.	1	Set

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
139	D.C. Compound Generator with control panel including fitted rheostat, voltmeter, ammeter and breaker DC-Compound Generator of 2.5KW, 220VDC with 5HP, 451V, 3-Ph, Sq. Cage Induction Motor.	1	Set
	Star Delta Starter for the above Motor		
	Field Regulator for Gen.600Ω X 600W		
	PANEL for performing experiment on Shunt Generator. Consisting of : AC- Voltmeter (0-500V), AC- Ammeter (0-5/10A), DC-Voltmeter(0-300V), DC-Ammeter (0-10A) Input and Out put Terminals, Indication Lamps, MCB, HRC Fuse, etc. incorporated to a Bakelite sheet with proper wiring and fitted to an angle frame of suitable size.		
140	DC Series Motor coupled with spring balance load DC - Series Motor, 3 HP, 220 V DC, 1500 rpm, S.P.D.P foot mounted type	1	Set
	2 - point starter		
	Pony Brake Arrangements for the above consisting of Brake Drum, Belt and Dial type spring Balances etc		
	PANEL for performing experiment on DC-Series Motor Consisting of : DC - Voltmeter (0 - 300 V), DC - Ammeter (0 - 15 A), Input and Output Terminals, Indication Lamp, Rotary switch, HRC Fuse, etc. incorporated to a Bakelite sheet with proper wiring and fitted to an angle frame of suitable size.		
	DC Shunt Motor DC - Shunt Motor, 3 HP, 220 V DC, 1500 rpm, S.P.D.P foot mounted type.		
	3 - point starter		

Pony Brake Arrangements for the above
consisting of Brake Drum, Belt and Dial
type
spring Balances etc.

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
141	PANEL for performing experiment on DC - Shunt Motor Consisting of : DC- Voltmeter (0 - 300 V), DC - Ammeter (0 - 15 A), Input and Output Terminals, Indication Lamp, Rotary switch, HRC Fuse, etc. incorporated to a Bakelite sheet with proper wiring and fitted to an angle frame of suitable size.	1	Set
142	DC compound Motor with starter and switch DC - Shunt Motor, 3 HP, 220V DC, 1500 rpm, S.P.D.P foot mounted type.	1	Set
	3 - point starter		
	Pony Brake Arrangements for the above consisting of Brake Drum, Belt and Dial type spring Balances etc.		
	PANEL for performing experiment on DC - Shunt Motor Consisting of : DC - Voltmeter (0 - 300 V), DC - Ammeter (0 - 15 A), Input and Output Terminals, Indication Lamp, Rotary switch, HRC Fuse, etc. incorporated to a Bakelite sheet with proper wiring and fitted to an angle frame of suitable size.		
143	Motor Generator(DC to AC) set consisting of - Shunt Motor with starting compensator and switch directly coupled to AC generator with exciter and switch board mounted with regulator, breaker, ammeter, voltmeter frequency meter, knife blade switch and fuses etc. Set complete with cast iron bed plate, fixing bolts, foundation bolts and flexible coupling. MG- Set consisting of DC Shunt Motor of 5 HP, 440V DC directly coupled to an AC Generator (Alternator) AC-3.5KVA, 400/230Volts, 3-phase, 4-wire, 0.8p.f., 50 cycles (without exciter) SPDP and foot mounted type	1	Set

3-Point Starter for 5HP
Field Regulator for Gen.600Ω X 600W
Field Regulator for Gen.600Ω X 600W

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
	PANEL for performing experiment on DC-Shunt Motor, Alternator. consisting of:-DC Shunt Motor with directly Coupled to AC Generator, exciter and switch panel board mounted with regulator, Ammeter, Voltmeter, frequency meter, knife blade switch & fuse etc. set complete with cast iron bed plate, fixing bolts and flexible coupling.		
144	AC Squirrel Cage Motor with star delta starter and triple pole iron clad switch fuse with Mechanical Load. AC Squirrel Cage Induction Motor, 5 HP, 3 - phase, 415 V, 50 Hz.	1	Set
	Manual type Star - Delta Starter		
	Pony Brake Arrangements for the above consisting of Brake Drum, Belt and Dial type spring Balances etc.		
	PANEL for performing experiment on Squirrel Cage Induction Motor Consisting of : AC - Voltmeter (0 - 500 V), AC - Ammeter (0 - 5 / 10 A), Input and Output Terminals, Indication Lamps, Rotary switch, HRC Fuse, etc. incorporated to a Bakelite sheet with proper wiring and fitted to an angle frame of suitable size.		
145	AC phase - wound slip ring Motor with starter switch AC – Slip Ring Induction Motor, 5 HP, 400 V, 3 - phase, 50 Hz.	1	Set
	Rotor resistance Starter (Open type and will be fixed into the Control Panel)		
	Pony Brake Arrangements for the above consisting of Brake Drum, Belt and Dial type spring Balances etc.		

<p>PANEL for performing experiment on Slip Ring Induction Motor.</p>	
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<p>Consisting of : AC - Voltmeter (0 - 500 V), Ammeter (0 - 10 A), Input and Output Terminals, Indication Lamps, Rotary switch, HRC Fuse, etc. incorporated to a Bakelite sheet with proper wiring and fitted to an angle frame of suitable size</p>	
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SL. NO.	NAME OF THE ITEMS	QTY	UNIT
146	Universal Motor with starter / switch Universal Motor, 1 HP, Single Phase, 230 Volts, 50 Cycles, 1440 rpm, foot mounted type.	1	No.
	Direct On Line Starter		
	Pony Brake Arrangements for the above consisting of Brake Drum, Belt and Dial type spring Balances etc		
	PANEL for performing experiment on AC Universal Motor. Consisting of : AC - Voltmeter (0 - 300 V), AC - Ammeter (0 - 10 A), Input and Output Terminals, Indication Lamp, Rotary switch, HRC Fuse, etc. incorporated to a Bakelite sheet with proper wiring and fitted to an angle frame of suitable size.		
147	Synchronous motor with accessories like starter, excitation arrangements. Auto Synchronous Motor of 3HP, 3-ph, 415V, 4 Pole, 1500rpm, 50 HZ separately excited type with damper winding across the field poles.	1	No.
	Pony Brake Arrangements for the above consisting of Brake Drum, Belt and Dial type spring Balances etc		
	Auto Synchronous Motor Starter :- consisting of : Variac 2A, –Rectifier type Exciter, AC- Voltmeter (0-500V), AC- Ammeter (0-10A), DC-Voltmeter (0-300V), DC-Ammeter (0-2A) , Contactor, Push Bottom, Input and Output Terminals, Indication Lamps, Change over switch, fittings for Powder coated MS Box.		
148	Thyristor / IGBT controlled D.C. motor drive with Tacho - Generator feedback arrangement 1 HP	1	No.
149	Thyristor/ IGBT controlled A.C. motor drive with VVVF control 3 Phase, 2 HP	1	No.

150	Single phase Transformer, core type, air cooled 1 KVA , 240 / 415 V, 50 Hz Transformer single phase, 1 KVA, 240 / 415 volts, 50 cycles core type, air cooled.	1	No.
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SL. NO.	NAME OF THE ITEMS	QTY	UNIT
151	Three phase transformer, shell type oil cooled with Delta / Star 3 KVA , 415 / 240 V, 50 Hz. Transformer three phase, 3 KVA 415/240 volts, 50 cycles, delta / star, shell type oil cooled.	1	No.
152	Electrical Machine Trainer – Suitable for demonstrating the construction and functioning of different types of DC machines and AC machines (single phase and three phase). Should be fitted with friction brake arrangement, dynamo meter, instrument panel and power supply unit	1	No.
153	Diesel Generator Set with changeover switch, over current breaker and water/ air-cooled with armature, star-delta connections AC 3 phase Diesel Generator Set with change over switch, MCB and water-cooled with armature, star connections AC 3 phase, 7.5 KVA, 415 volt	1	No.
154	Used DC Generator series, type for overhauling practice	1	No.
	Used DC Generator shunt, type for overhauling practice	1	No.
	Used DC Generator Compound, type for overhauling practice	1	No.
155	Pillar Electric Drill Machine Motorized 12 - 20 mm Capacity, 1 HP, 440 V, 3 phase, Induction Motor with DOL starter, Bench Type	1	No.
156	Motorised Bench Grinder 1 HP. 3 phase, 440V with DOL starter, Double side with smooth and rough wheel with Tool Base 200 MM	1	No.
	AC - Series Motor, 1 HP, Single Phase, 230 Volts, 50 Cycles, 1440 rpm, foot mounted type		
157	Direct On Line Starter		

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
	PANEL for performing experiment on AC Series Motor. Consisting of : AC - Voltmeter (0 - 300V), AC - Ammeter (0 - 5A), Input and Out put Terminals, Indication Lamp, Rotary switch, HRC Fuse, etc. incorporated to a Bakelite sheet with proper wiring and fitted to an angle frame of suitable size.	1	Set
158	Single Phase Capacitor Motor with starter switch AC - Capacitor Start Motor, 1 HP, Single Phase, 230 Volts, 50 Cycles, 1440 rpm, foot - mounted type.	1	Set
	Pony Brake Arrangements for the above consisting of Brake Drum, Belt and Dial type spring Balances etc.		
	Direct On Line Starter		
	PANEL for performing experiment on AC Capacitor Motor : Consisting of : AC - Voltmeter (0 - 300 V), AC - Ammeter (0 - 10 A), Input and Out put Terminals, Indication Lamp, Rotary switch, HRC Fuse, etc. incorporated to a Bakelite sheet with proper wiring and fitted to an angle frame of suitable size.		
159	Manual Motor coil Winding Machine With step arbor	1	No.
160	Ceiling fan coil Winding Machine 250 V, 50 Hz, 1 - Φ , with speed control	1	No.
161	Primary current injection set 220 V, 50 Hz, 1 - Φ , output current - 200 A (min) with timer	1	No.
162	Stepper Motor with Digital Controller Stepper Motor with Micro - processor based Control unit for stepper Motor (Advanced Model)	1	No.
	Shaded Pole Motor		
	Direct On Line Starter		

SL. NO.	NAME OF THE ITEMS	QTY	UNIT
163	PANEL for performing experiment on AC Shaded Pole Motor. Consisting of : AC - Voltmeter (0 -300 V), AC - Ammeter (0 - 10 A), Input and Output Terminals, Indication Lamp, Rotary switch, HRC Fuse, etc. incorporated to a Bakelite sheet with proper wiring and fitted to an angle frame of suitable size.	1	Set
164	Working Bench 2.5 m x 1.20 m x 0.75 m	1	No.
165	Wiring Board 3 - meter x 1 meter with 0.5 meter projection on the top	1	No.
166	Instructor's table	1	No.
167	Instructor's chair	1	No.
168	Metal Rack 100 cm x 150 cm x 45 cm	1	No.
169	Lockers with drawers	1	No.
170	Almirah 2.5 m x 1.20 m x 0.5 m	1	No.
171	Black board / white board (minimum 4 X 6 feet)	1	No.
172	Fire Extinguisher CO2 2 KG	1	No.
173	Fire Buckets Standard size	1	No.

