

**DIRECTORATE OF TECHNICAL EDUCATION & INDUSTRIAL TRAINING,  
PUNJAB**

**TAKNIKI SIKHIA BHAWAN, PLOT NO 1A, SECTOR 36-A, CHANDIGARH- 160036.**

Tel. No- (0172) 2614031, 2648012, 2614446. Fax No- (0172) 2614622

**BIDDING DOCUMENTS**

**UNDER**

**NATIONAL COMPETITIVE BIDDING**

**FOR**

**PROCUREMENT OF MACHINERY & EQUIPMENT**

**UNDER THE WORLD BANK ASSISTED**

**“Reforms and Improvement in Vocational Training Services  
Rendered by the Central & State Governments”**

**Vocational Training Improvement Project  
Credit No. - IDA 4319-IN**

**BID REFERENCE NO: IT/VTIP/WB/NCB/Automobile/2010-11/7**

**DIRECTORATE OF TECHNICAL EDUCATION & INDUSTRIAL TRAINING,  
PUNJAB (I.T. Wing)**

**TAKNIKI SIKHIA BHAWAN, PLOT NO 1A, SECTOR 36-A, CHANDIGARH- 160036.**

Tel. No- (0172) 2614031, 2648012, 2614446. Fax No- (0172) 2614622  
Websit: [www.dtepunjab.gov.in](http://www.dtepunjab.gov.in), e-mail : [ditpb\\_coe\\_pu@yahoo.com](mailto:ditpb_coe_pu@yahoo.com)

**NATIONAL COMPETITIVE BIDDING FOR  
THE SUPPLY OF MACHINERY & EQUIPMENT**

BID REFERENCE	: <b>IT/VTIP/WB/NCB/Automobile/2010-11/7</b>
DATE OF COMMENCEMENT OF SALE OF BIDDING DOCUMENT	: <b>23-12-2010</b>
LAST DATE FOR SALE OF BIDDING DOCUMENT	: <b>23-01-2011</b>
* LAST DATE AND TIME FOR RECEIPT OF BIDS	: <b>24-01-2011 (X+ 30) +1, 2.00 P.M.)</b>
TIME AND DATE OF OPENING OF BIDS	: <b>24-01-2011 (X+ 30) +1, 2.30 P.M.)</b>

PLACE OF RECEIPT OF BIDS : Room No. 304, 3<sup>rd</sup> Floor.

PLACE OF OPENING OF BIDS : Directorate of Technical  
Education & Industrial Training,  
Punjab, Takniki Sikhia Bhawan,  
Room No 401, 4<sup>th</sup> Floor, Plot No 1A,  
Sector-36 A, Chandigarh-160036  
Ph.No. (0172) 2614031, 2648012,  
Fax. No. (0172) 2614622  
E-mail : ditpb\_coe\_pu@yahoo.com  
js\_ddp@yahoo.com

ADDRESS FOR COMMUNICATION : State Project Director  
VTIP) cum Director of  
Technical Education & Industrial  
Training, Punjab, Takniki Sikhia  
Bhawan, (I.T.Wing), Room No 304, 3<sup>rd</sup>  
Floor, Plot No 1-A, Sector-36 A,  
Chandigarh-160036  
Ph.No. (0172) 2614031, 2648012,  
Fax. No. (0172) 2614622  
E-mail : ditpb\_coe\_pu@yahoo.com  
js\_ddp@yahoo.com

\* *Should be the same as for the deadline for receipt of bids or promptly thereafter*

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

**NATIONAL COMPETITIVE BIDDING FOR  
THE SUPPLY OF MACHINERY & EQUIPMENTS**

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

Date: \_\_\_\_\_ 17-12-2010

Credit No. : IDA 4319-IN

IFB No. **IT/VTIP/WB/NCB/Automobile/2010-11/7**

- The Government of India has received a Credit (Credit 4319-IN) from the International Development Association in various currencies towards the cost of Vocational Training Improvement Project and it is intended that part of the proceeds of this credit will be applied to eligible payments under the contracts for which this Invitation for Bids is issued.
- The State Project ( VTIP ) Director, Directorate of Technical Education & Industrial Training, Punjab, Takniki SiKhia Bhawan, Plot No 1-A, Sector-36 A, Chandigarh-160036 now invites sealed bids from eligible bidders for supply of Machinery & Equipment listed below:

Sch edu le No	Description	Quantity	Bid Document Price	Bid Security
1.	Air brake assembly.	2 Nos.	*	300/-
2.	Chassis of heavy commercial motor vehicle, with all accessories in working condition.	2 Nos.	*	14,000/-
3.	Conventional front excel wheel assembly.	2 Nos.	*	18,000/-
4.	Cut model of 2 stroke Petrol engine on stand.	4 Nos.	*	1,200/-
5.	Cut model of 4 stroke diesel engine on stand	4 Nos.	*	6,500/-
6.	Cut model of 4 stroke petrol engine on stand	4 Nos.	*	4,000/-
7.	Cut-Section model of a sliding mesh gear box	2 Nos	*	800/-
8.	Cut-Section model of a synchromesh gear box	2 Nos	*	1,000/-
9.	Cut-Section model of differential assembly	2 Nos	*	1,000/-
10.	Diaphram type Clutch	4 Nos	*	1,200/-
11.	Diesel engine (4 stroke, Multi Cylinder) of different makes in running condition.	8 Nos	*	9,600/-
12.	Diesel engine 4 stroke for practice, up to 80 H.P.	8 Nos	*	13,000/-

13	Diesel engine 4 stroke up to 10HP /80HP running condition	2 Nos	*	2,000/-
14	Diesel Engines of latest models of vehicles	4 Nos	*	28,000/-
15	Drum brake assembly	8 Nos	*	4,000/-
16	Engine control sensors 8 types	4 each	*	10,000/-
17	Engine analyzer/Smoke Testing Machine	2+2=4 Nos	*	16,000/-
18	Engine Scanner	2 Nos	*	20,000/-
19	Engines 4 cylinder petrol MPFI other than procured under module 101 and 02.	1 No.	*	3,000/-
20	Engines 4 cylinder diesel engine other than procured under module 101 and 02	1 No.	*	5,000/-
21	Fuel injection pump test bench with accessories	1 No.	*	6,000/-
22	Gear box with differential (Transaxle)	2 Nos	*	3,000/-
23	Hydraulic brake assembly. (Brake pedal, booster, Tandem master cylinder, wheel cylinder, brake drum – mock up assembly)	2 Nos	*	2,000/-
24	Petrol engine 4 stroke fitted with MPFI / carburetor fuel system upto 50 HP	4 Nos	*	3,200/-
25	Petrol engine of latest model (CNG engine) with workshop manuals	2 Nos	*	2,400/-
26	Petrol Engines of cars of latest models with manuals	4 Nos	*	6,400/-
27	Rear axle assembly complete with drive shafts and brake drums (full floating, semi floating type and ¼ floating)	2 Nos	*	2,000/-
28	Synchromesh gear box of LCV	8 Nos	*	10,500/-
29	Spark plug cleaner and tester similar to Bosch / champion.	4 Nos	*	1,500/-
30	Tyre remover pneumatic & mechanical type.	2 set	*	1,100/-
31	Tyre retreading machine with accessory	1 No	*	3,000/-
32	Tyre vulcanizing machine	2 Nos	*	4,000/-

33	Vacuum assisted hydraulic brake assembly	2 Nos	*	2,500/-
34	Wheel alignment gauge	2 Nos	*	1,500/-
35	Wheel balancing machine with accessory	3 set	*	24,000/-

- A) Bids should be submitted separately for each items.
- B) Bid Security is to be submitted separately for each items.
- C) \* Bid Document Price Rs 1000/- for each items should be deposited along with bid in the form of Demand Draft payable in Favour of Finance Officer, Finance Unit (SPIU), Deptt. Of Industrial Training, Punjab, Chandigarh.

3. Interested eligible Bidders may obtain further information from and inspect the bidding documents at the office of the Directorate of Technical Education & Industrial Training, Punjab, Takniki Sikhia Bhawan, Procurement Unit, Room No 304, Plot No 1-A, Sector-36 A, Chandigarh-160036 India.
4. A complete set of bidding documents may be purchased by any interested eligible bidder on the submission of a written application to the above office and upon payment of a non-refundable fee as indicated below in the form of a Demand Draft/Cashier's cheque/Certified cheque in favour of Finance Officer, Finance Unit (SPIU), Deptt. Of Industrial Training, Punjab, Chandigarh. payable at Chandigarh or can be downloaded from the Website [www.dtepunjab.gov.in](http://www.dtepunjab.gov.in) under Centre of Excellence Link [www.dtepunjab.gov.in/web/coe\\_web/CoE\\_ITI.htm](http://www.dtepunjab.gov.in/web/coe_web/CoE_ITI.htm). Downloaded & Duly completed documents should be submitted alongwith the price of Bidding Documents in the form of Demand Draft of Nationalised /Scheduled Bank in favour of Finance Officer, Finance Unit (SPIU), Deptt. Of Industrial Training, Punjab, Chandigarh. payable at Chandigarh  
Bidders who download the document from Website and wish to participate in the bid, will be required to submit the cost of the bid document at the time of bid submission otherwise the bid will be made non responsive/Cancelled.
5. The provisions in the Instructions to Bidders and in the General Conditions of contract are based on the provisions of the World Bank Standard Bidding Document - Procurement of Goods.
6. The bidding document may be obtained from the office of Directorate of Technical Education & Industrial Training, Punjab, Procurement Unit (SPIU) Room No.304, 3<sup>rd</sup> Floor, Plot No 1-A, Sector-36 A, Chandigarh-160036 during office hours namely, from 9.00 AM to 5.00 PM, on all working days either in person or by post.
- (a) Price of bidding document :Rs. 1000/- (For each Schedule)  
**(non-refundable)**
- (b) Date of commencement of Sale of bidding document : 23-12-2010
- (c) Last date for sale of Bidding document : 23-01-2011 X+30

- (d) Last date and time for Receipt of bids :24-01-2011(X+30)+1, 2.00P.M.)
- (e) Time and date of Opening of bids : 24-01-2011 (X+30)+1, 2.30 P.M.)
- (f) Place of opening of bids :  
**Directorate of Technical Education & Industrial Training, Punjab, Takniki Sikhia Bhawan, Room No 401, 4<sup>th</sup> Floor, Plot No 1-A, Sector-36 A, Chandigarh-160036**  
**Ph.No. (0172) 2614031, 2648012,**  
**Fax. No. (0172) 2614622**  
**E-mail : ditpb\_coe\_pu@yahoo.com**  
**js\_ddp@yahoo.com**
- (g) Address for communication :  
**State Project Director (VTIP) cum Director of Technical Education & Industrial Training, Punjab, Takniki Sikhia Bhawan, (I.T.Wing), Room No 304, 3<sup>rd</sup> Floor, Plot No 1-A, Sector-36 A, Chandigarh-160036**  
**Ph.No. (0172) 2614031, 2648012,**  
**Fax. No. (0172) 2614622**  
**E-mail : ditpb\_coe\_pu@yahoo.com**  
**js\_ddp@yahoo.com**

7. All bids must be accompanied by a bid security as specified in the bid document and must be delivered to the above office at the date and time indicated above.
8. Bids will be opened in the presence of Bidders' representatives who choose to attend on the specified date and time.
9. In the event of the date specified for bid receipt and opening being declared as a closed holiday for purchaser's office, the due date for submission of bids and opening of bids will be the following working day at the appointed times.

**State Project Director (VTIP)**  
 Cum Director, Technical Education &  
 Industrial Training, Punjab,  
 Chandigarh.

**SECTION II: INSTRUCTIONS TO BIDDER**

**SECTION II: INSTRUCTIONS TO BIDDERS**

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### A. Introduction

## **DIRECTORATE OF TECHNICAL EDUCATION & INDUSTRIAL TRAINING, PUNJAB**

**TAKNIKI SIKHIA BHAWAN, PLOT NO 1A, SECTOR 36-A, CHANDIGARH- 160036.**

### **1. Source of Funds**

- 1.1 The Government of India has received a credit from the International Development Association (Here-in-after called as Bank) in various currencies equivalent to USD 280 million towards the cost of Vocational Training Improvement Project (CR 4319 IN) and intends to apply part of the proceeds of this credit to eligible payments under the contracts for which this invitation for Bid is issued..
- 1.2 Payment by the Bank will be made only at the request of the Borrower and upon approval by the Bank in accordance with the terms and conditions of the Credit Agreement, and will be subject in all respects to the terms and conditions of that agreement. The Credit Agreement prohibits a withdrawal from the Credit account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import, to the knowledge of the Bank, is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than the Borrower shall derive any rights from the Credit Agreement or have any claim to the Credit/Loan proceeds.

### **2. Eligible Bidders**

- 2.1 This Invitation for Bids is open to all suppliers from eligible source countries as defined in *Guidelines: Procurement under IDA Credits*, May 2004, revised October 2006 hereinafter referred as the *IDA Guidelines for Procurement*, except as provided hereinafter.
- 2.2 Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Purchaser to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under this Invitation of Bids.
- 2.3 Government-owned enterprises in the Purchaser's country may participate only if they are legally and financially autonomous, if they operate under commercial law, and if they are not a dependent agency of the Purchaser.
- 2.4 Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by the Bank in accordance with ITB Clause 36.1.

### **3. Eligible Goods and Services**

- 3.1 All goods and ancillary services to be supplied under the Contract shall have their origin in eligible source countries, defined in the *IDA Guidelines for Procurement* and all expenditures made under the Contract will be limited to such goods and services.
- 3.2 For purposes of this clause, "origin" means the place where the goods are mined, grown, or produced or from which the ancillary services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembling of components, a commercially recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.
- 3.3 The origin of goods and services is distinct from the nationality of the Bidder.

### **4. Cost of Bidding**

- 4.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and "the Purchaser", will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

### B. The Bidding Documents

## **5. Content of Bidding Documents**

- 5.1 The goods required, bidding procedures and contract terms are prescribed in the bidding documents. In addition to the Invitation for Bids, the bidding documents include:
- (a) Instruction to Bidders (ITB);
  - (b) General Conditions of Contract (GCC);
  - (c) Special Conditions of Contract (SCC);
  - (d) Schedule of Requirements;
  - (e) Technical Specifications;
  - (f) Bid Form and Price Schedules;
  - (g) Bid Security Form;
  - (h) Contract Form;
  - (i) Performance Security Form;
  - (j) Performance Statement Form;
  - (k) Manufacturer's Authorization Form;
  - (l) Bank Guarantee for Advance Payment Form; and
  - (m) Equipment and Quality Control Form.
- 5.2 The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and may result in rejection of its bid.

## **6. Clarification of Bidding Documents**

- 6.1 A prospective Bidder requiring any clarification of the bidding documents may notify the Purchaser in writing or by telex or cable or fax at the Purchaser's mailing address indicated in the Invitation for Bids. The Purchaser will respond in writing to any request for clarification of the bidding documents which it receives no later than 15 days prior to the deadline for submission of bids prescribed by the Purchaser. Written copies of the Purchaser's response (including an explanation of the query but without identifying the source of inquiry) will be sent to all prospective bidders which have received the bidding documents.

## **7. Amendment of Bidding Documents**

- 7.1 At any time prior to the deadline for submission of bids, the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the bidding documents by amendment.
- 7.2 All prospective bidders who have received the bidding documents will be notified of the amendment in writing or by cable or by fax, and will be binding on them.
- 7.3 In order to allow prospective bidders reasonable time in which to take the amendment into account in preparing their bids, the Purchaser, at its discretion, may extend the deadline for the submission of bids.

## **C. Preparation of Bids**

### **8. Language of Bid**

- 8.1 The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser, shall be written in English language. Supporting documents and printed literature furnished by the Bidder may be 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 translation shall govern.

### **9. Documents Constituting the Bid**

- 9.1 The bid prepared by the Bidder shall comprise the following components:
- (a) A Bid Form and a Price Schedule completed in accordance with ITB Clauses 10, 11 and 12;

- (b) Documentary evidence established in accordance with ITB Clause 13 that the Bidder is eligible to bid and is qualified to perform the contract if its bid is accepted;
- (c) documentary evidence established in accordance with ITB Clause 14 that the goods and ancillary services to be supplied by the Bidder are eligible goods and services and conform to the bidding documents; and
- (d) Bid security furnished in accordance with ITB Clause 15.

## **10. Bid Form**

- 10.1 The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the bidding documents, indicating the goods to be supplied, a brief description of the goods, their country of origin, quantity and prices.

## **11. Bid Prices**

- 11.1 The Bidder shall indicate on the Price Schedule the unit prices and total bid prices of the goods it proposes to supply under the Contract. To this end, the Bidders are allowed the option to submit the bids for any one or more schedules specified in the 'Schedule of Requirements' and to offer discounts for combined schedules. However, Bidders shall quote for the complete requirement of goods and services specified under each schedule on a single responsibility basis, failing which such bids will not be taken into account for evaluation and will not be considered for award.

- 11.2 Prices indicated on the Price Schedule shall be entered separately in the following manner:

- (i) the price of the goods, quoted (ex-works, ex-factory, ex-showroom, ex-warehouse, or off-the-shelf, as applicable), including all duties and sales and other taxes already paid or payable:
  - a. on components and raw material used in the manufacture or assembly of goods quoted ex-works or ex-factory; or
  - b. on the previously imported goods of foreign origin quoted ex-showroom, ex-warehouse or off-the-shelf.
- (ii) Any Indian duties, sales and other taxes which will be payable on the goods if this Contract is awarded;
- (iii) the price for inland transportation, insurance and other local costs incidental to delivery of the goods to their final destination; and
- (iv) the price of other incidental services listed in Clause 8 of the Special Conditions of Contract.

- 11.3 The Bidder's separation of the price components in accordance with ITB Clause 11.2 above will be solely for the purpose of facilitating the comparison of bids by the Purchaser and will not in any way limit the Purchaser's right to contract on any of the terms offered.

- 11.4 Fixed Price. Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account. A bid submitted with an adjustable price quotation will be treated as non-responsive and rejected, pursuant to ITB Clause 24.

## **12. Bid Currencies**

- 12.1 Prices shall be quoted in Indian Rupees:

## **13. Documents Establishing Bidder's Eligibility and Qualifications**

- 13.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its bid, documents establishing the Bidder's eligibility to bid and its qualifications to perform the Contract if its bid is accepted.

- 13.2 The documentary evidence of the Bidder's eligibility to bid shall establish to the Purchaser's satisfaction that the Bidder, at the time of submission of its bid, is from an eligible country as defined under ITB Clause 2.

- 13.3 The documentary evidence of the Bidder's qualifications to perform the Contract if its bid is accepted, shall establish to the Purchaser's satisfaction:

- (a) that, in the case of a Bidder offering to supply goods under the contract which the Bidder did not manufacture or otherwise produce, the Bidder has been duly authorized (as per authorization form in Section XII) by the goods' Manufacturer or producer to supply the goods in India.

*[Note: Supplies for any particular item in each schedule of the bid should be from one manufacturer only. Bids from agents offering supplies from different manufacturer's for the same item of the schedule in the bid will be treated as non-responsive.]*

- (b) that the Bidder has the financial, technical, and production capability necessary to perform the Contract and meets the criteria outlined in the Qualification requirements specified in Section VI-A. To this end, all bids submitted shall include the following information:
- (i) The legal status, place of registration and principal place of business of the company or firm or partnership, etc.;
  - (ii) Details of experience and past performance of the bidder on equipment offered and on those of similar nature within the past three/five years and details of current contracts in hand and other commitments (suggested proforma given in Section XI);

#### **14. Documents Establishing Goods' Eligibility and Conformity to Bidding Documents**

- 14.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its bid, documents establishing the eligibility and conformity to the bidding documents of all goods and services which the Bidder proposes to supply under the contract.
- 14.2 The documentary evidence of the goods and services eligibility shall consist of a statement in the Price Schedule on the country of origin of the goods and services offered which shall be confirmed by a certificate of origin at the time of shipment.
- 14.3 The documentary evidence of conformity of the goods and services to the bidding documents may be in the form of literature, drawings and data, and shall consist of:
- (a) A detailed description of the essential technical and performance characteristics of the goods ;
  - (b) a list giving full particulars, including available sources and current prices, of spare parts, special tools, etc., necessary for the proper and continuing functioning of the goods for a period of two years, following commencement of the use of the goods by the Purchaser; and
  - (c) an item-by-item commentary on the Purchaser's Technical Specifications demonstrating substantial responsiveness of the goods and services to those specifications or a statement of deviations and exceptions to the provisions of the Technical Specifications.
- 14.4 For purposes of the commentary to be furnished pursuant to ITB Clause 14.3(c) above, the Bidder shall note that standards for workmanship, material and equipment, and references to brand names or catalogue numbers designated by the Purchaser in its Technical Specifications are intended to be descriptive only and not restrictive. The Bidder may substitute alternative standards, brand names and/or catalogue numbers in its bid, provided that it demonstrates to the Purchaser's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.

#### **15. Bid Security**

- 15.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its bid, a bid security in the amount as specified in Section-V - Schedule of Requirements.
- 15.2 The bid security is required to protect the Purchaser against the risk of Bidder's conduct which would warrant the security's forfeiture, pursuant to ITB Clause 15.7.
- 15.3 The bid security shall be denominated in Indian Rupees and shall:

- (a) at the bidder's option, be in the form of either a certified check, letter of credit, a demand draft, or a bank guarantee from a nationalized/Scheduled Bank located in India or by a reputable banking institution selected by the bidder and located abroad in any eligible country;
- (b) be substantially in accordance with one of the form of bid security included in Section VIII or other form approved by the Purchaser prior to bid submission;
- (c) be payable promptly upon written demand by the Purchaser in case any of the conditions listed in ITB Clause 15.7 are invoked;
- (d) be submitted in its original form; copies will not be accepted; and
- (e) Remain valid for a period of 45 days beyond the original validity period of bids, or beyond any period of extension subsequently requested under ITB Clause 16.2.

15.4 Any bid not secured in accordance with ITB Clauses 15.1 and 15.3 above will be rejected by the Purchaser as non-responsive, pursuant to ITB Clause 24.

15.5 Unsuccessful bidder's bid securities will be discharged/returned as promptly as possible but not later than 30 days after the expiration of the period of bid validity prescribed by the Purchaser, pursuant to ITB Clause 16.

15.6 The successful Bidder's bid security will be discharged upon the Bidder signing the Contract, pursuant to ITB Clause 34, and furnishing the performance security, pursuant to ITB Clause 35.

15.7 The bid security may be forfeited:

- (a) if a Bidder (i) withdraws its bid during the period of bid validity specified by the Bidder on the Bid Form; or (ii) does not accept the correction of errors pursuant to ITB Clause 24.2; or
- (b) In case of a successful Bidder, if the Bidder fails:
  - (i) To sign the Contract in accordance with ITB Clause 34; or
  - (ii) To furnish performance security in accordance with ITB Clause 35.

## **16. Period of Validity of Bids**

16.1 Bids shall remain valid for **90** days after the deadline for submission of bids prescribed by the Purchaser, pursuant to ITB Clause 19. A bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.

16.2 In exceptional circumstances, the Purchaser may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing (or by cable or telex or fax). The bid security provided under ITB Clause 15 shall also be suitably extended. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required nor permitted to modify its bid, except as provided in ITB Clause 16.3 hereinafter.

16.3 In the case of fixed prices contracts, in the event that the Purchaser requests and the Bidder agrees to an extension of the validity period, the contract price, if the Bidder is selected for award shall be the bid price corrected as follows :

The price shall be increased by the factor **(B=10% per Annum)<sup>1</sup>** for each week or part of a week that has elapsed from the expiration of the initial bid validity to the date of notification of award to the successful Bidder.

16.4 Bid evaluation will be based on the bid prices without taking into consideration the above corrections.

## **17. Format and Signing of Bid**

17.1 The Bidder shall prepare two copies of the bid, clearly marking each "Original Bid" and "Copy Bid", as appropriate. In the event of any discrepancy between them, the original shall govern.

- 17.2 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the Contract. The latter authorization shall be indicated by written power-of-attorney accompanying the bid. All pages of the bid, except for unamended printed literature, shall be initialed by the person or persons signing the bid.
- 17.3 Any interlineations, erasures or overwriting shall be valid only if they are initialed by the persons or persons signing the bid.
- 17.4 The Bidder shall furnish information as described in the Form of Bid on commissions or gratuities, if any, paid or to be paid to agents relating to this Bid, and to contract execution if the Bidder is awarded the contract.

#### **D. Submission of Bids**

#### **18. Sealing and Marking of Bids**

- 18.1 The Bidders shall seal the original and each copy of the bid in separate inner envelopes, duly marking the envelopes as "original" and "copy". He shall then place all the inner envelopes in an outer envelope.
- 18.2 **The inner and outer envelopes shall:**

- (a) be addressed to the Purchaser at the following address:

**Directorate of Technical Education & Industrial Training, Punjab, Procurement Unit, (SPIU), Room No.304, 3<sup>rd</sup> Floor, Plot No 1-A, Sector-36 A, Chandigarh-160036**

- (b) bear the Project Name “ **Vocational Training Improvement Project Credit No. IDA 4319-INA**”, the Invitation for Bids(IFB) title and number “**IT/VTIP/WB/NCB/Automobile/2010-11/7**”, and a statement “**Do not open before 24-01-2011(02.30 P.M. on (x+30)+1.)**”
- 18.3 The inner envelopes shall also indicate the name and address of the Bidder to enable the bid to be returned unopened in case it is declared "late".
- 18.4 If the outer envelope is not sealed and marked as required by ITB Clause 18.2, the Purchaser will assume no responsibility for the bid's misplacement or premature opening.
- 18.5 Telex, cable or facsimile bids will be rejected.

#### **19. Deadline for Submission of Bids**

- 19.1 Bids must be received by the Purchaser at the address specified under ITB Clause 18.2 (a) no later than the time and date specified in the Invitation for Bids (Section I). In the event of the specified date for the submission of Bids being declared a holiday for the Purchaser, the Bids will be received upto the appointed time on the next working day.
- 19.2 The Purchaser may, at its discretion, extend this deadline for submission of bids by amending the bid documents in accordance with ITB Clause 7, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

#### **20. Late Bids**

- 20.1 Any bid received by the Purchaser after the deadline for submission of bids prescribed by the Purchaser, pursuant to ITB Clause 19, will be rejected and/or returned unopened to the Bidder.

#### **21. Modification and Withdrawal of Bids**

- 21.1 The Bidder may modify or withdraw its bid after the bid's submission, provided that written notice of the modification or withdrawal is received by the Purchaser prior to the deadline prescribed for submission of bids.

- 21.2 The Bidder's modification or withdrawal notice shall be prepared, sealed, marked and dispatched in accordance with the provisions of ITB Clause 18. A withdrawal notice may also be sent by telex or cable or fax but followed by a signed confirmation copy, post marked not later than the deadline for submission of bids.
- 21.3 No bid may be modified subsequent to the deadline for submission of bids.
- 21.4 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 Bidder on the bid form. Withdrawal of a bid during this interval may result in the Bidder's forfeiture of its bid security, pursuant to ITB Clause 15.7.

### **E. Bid Opening and Evaluation of Bids**

#### **22. Opening of Bids by the Purchaser**

- 22.1 The Purchaser will open all bids, in the presence of Bidders' representatives who choose to attend, at 24-01-2011(2.30 P.M. on (X+30)+1). And in the following location:

**Directorate of Technical Education & Industrial Training, Takniki Sikhia  
Bhawan, Punjab, Room No.401, 4<sup>th</sup> Floor, Plot No 1-A, Sector-36 A, Chandigarh-160036**

The Bidders' 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.

- 22.2 The bidders' names, bid modifications or withdrawals, bid prices, discounts, and the presence or absence of requisite bid 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 Bidder pursuant to ITB Clause 20.
- 22.3 Bids (and modifications sent pursuant to ITB Clause 21.2) that are not opened and read out at bid opening shall not be considered further for evaluation, irrespective of the circumstances.
- 22.4 The Purchaser will prepare minutes of the bid opening.

#### **23. Clarification of Bids**

- 23.1 During evaluation of bids, the Purchaser may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing and no change in prices or substance of the bid shall be sought, offered or permitted.

#### **24. Preliminary Examination**

- 24.1 The Purchaser will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order. Bids from Agents, without proper authorization from the manufacturer as per Section XII, shall be treated as non-responsive.
- 24.1.1 Where the Bidder has quoted for more than one schedule, if the bid security furnished is inadequate for all the schedules, the Purchaser shall take the price bid into account only to the extent the bid is secured. For this purpose, the extent to which the bid is secured shall be determined by evaluating the requirement of bid security to be furnished for the schedule included in the bid (offer) in the serial order of the Schedule of Requirements of the Bidding document.
- 24.2 Arithmetical errors will be rectified on the following basis. 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 there is a discrepancy between words and figures, the amount in words will prevail. If the supplier does not accept the correction of errors, its bid will be rejected and its bid security may be forfeited.

- 24.3 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 Bidder.
- 24.4 Prior to the detailed evaluation, pursuant to ITB Clause 26, the Purchaser will determine the substantial responsiveness of each bid to the bidding documents. For purposes of these Clauses, a substantially responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. Deviations from or objections or reservations to critical provisions such as those concerning Performance Security (GCC Clause 7), Warranty (GCC Clause 15), Force Majeure (GCC Clause 25), Limitation of liability (GCC Clause 29), Applicable law (GCC Clause 31), and Taxes & Duties (GCC Clause 33) will be deemed to be a material deviation. The Purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.
- 24.5 If a bid is not substantially responsive, it will be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the non-conformity.

**25. Deleted**

**26. Evaluation and Comparison of Bids**

- 26.1 The Purchaser will evaluate and compare the bids which have been determined to be substantially responsive, pursuant to ITB Clause 24 for each schedule separately. No bid will be considered if the complete requirements covered in the schedule is not included in the bid. However, as stated in Para 11, Bidders are allowed the option to bid for any one or more schedules and to offer discounts for combined schedules. These discounts will be taken into account in the evaluation of the bids so as to determine the bid or combination of bids offering the lowest evaluated cost for the Purchaser in deciding award(s) for each schedule.
- 26.2 The Purchaser's evaluation of a bid will exclude and not take into account:
- (a) in the case of goods manufactured in India or goods of foreign origin already located in India, sales and other similar taxes, which will be payable on the goods if a contract is awarded to the Bidder;
  - (b) any allowance for price adjustment during the period of execution of the Contract, if provided in the bid.
- 26.3 Deleted.
- 26.4 The Purchaser's evaluation of a bid will take into account, in addition to the bid price (Ex-factory/ex-warehouse/off-the-shelf price of the goods offered from within India, such price to include all costs as well as duties and taxes paid or payable on components and raw material incorporated or to be incorporated in the goods, and Excise duty on the finished goods, if payable) and price of incidental services, the following factors, in the manner and to the extent indicated in ITB Clause 26.5 and in the Technical Specifications:
- (a) Cost of inland transportation, insurance and other costs within India incidental to the delivery of the goods to their final destination;
  - (b) Delivery schedule offered in the bid;
  - (c) Deviations in payment schedule from that specified in the Special Conditions of Contract;
  - (d) The cost of components, mandatory spare parts and service;
  - (e) The availability in India of spare parts and after-sales services for the goods / equipment offered in the bid;
  - (f) The projected operating and maintenance costs during the life of the equipment; and
  - (g) The performance and productivity of the equipment offered.
- 26.5 Pursuant to ITB Clause 26.4, one or more of the following evaluation methods will be applied:
- (a) *Inland Transportation, Insurance and Incidentals:*

- (i) Inland transportation, insurance and other incidentals for delivery of goods to the final destination as stated in ITB Clause 11.2 (iii).

The above costs will be added to the bid price.

(b) *Delivery Schedule:*

- (i) The Purchaser requires that the goods under the Invitation for Bids shall be delivered at the time specified in the Schedule of Requirements. The estimated time of arrival of the goods at the project site should be calculated for each bid after allowing for reasonable transportation time. Treating the date as per schedule of requirements as the base, a delivery "adjustment" will be calculated for other bids at 2% of the ex-factory price including excise duty for each month of delay beyond the base and this will be added to the bid price for evaluation. No credit will be given to earlier deliveries and bids offering delivery beyond 3 months of stipulated delivery period will be treated as unresponsive.

(c) *Deviation in Payment Schedule:*

The Special Conditions of Contract stipulate the payment schedule offered by the Purchaser. If a bid deviates from the schedule and if such deviation is considered acceptable to the Purchaser, the bid will be evaluated by calculating interest earned for any earlier payments involved in the terms outlined in the bid as compared to those stipulated in this invitation, at a rate of 14 percent per annum.

(d) *Cost of Spare Parts: Deleted*

(e) *Spare Parts and After Sales Service Facilities in India:*

The cost to the Purchaser of establishing the minimum service facilities and parts inventories, as outlined elsewhere in the bidding documents, if quoted separately, shall be added to the bid price.

(f) *Operating and Maintenance Costs: Deleted*

(g) *Performance and Productivity of the Equipment: Deleted*

**27. Deleted.**

**28. Contacting the Purchaser**

- 28.1 Subject to ITB Clause 23, no Bidder shall contact the Purchaser on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded. If the bidder wishes to bring additional information to the notice of the purchaser, it should do so in writing.
- 28.2 Any effort by a Bidder to influence the Purchaser in its decisions on bid evaluation, bid comparison or contract award may result in rejection of the Bidder's bid.

**F. Award of Contract**

**29. Post qualification**

- 29.1 In the absence of prequalification, the Purchaser will determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated responsive bid meets the criteria specified in ITB Clause 13.3 (b) and is qualified to perform the contract satisfactorily.
- 29.2 The determination will take into account the Bidder's financial, technical and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Clause 13, as well as such other information as the Purchaser deems necessary and appropriate.

- 29.3 An affirmative determination will be a prerequisite for award of the Contract to the Bidder. A negative determination will result in rejection of the Bidder's bid, in which event the Purchaser will proceed to the next lowest evaluated bid to make a similar determination of that Bidder's capabilities to perform the contract satisfactorily.

**30. Award Criteria**

- 30.1 Subject to ITB Clause 32, the Purchaser will award the Contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined as the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.

**31. Purchaser's right to vary Quantities at Time of Award**

- 31.1 The Purchaser reserves the right at the time of Contract award to increase or decrease by up to 15 percent of the quantity of goods and services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions.

**32. Purchaser's Right to Accept Any Bid and to Reject Any or All Bids**

- 32.1 The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to the affected Bidder or bidders.

**33. Notification of Award**

- 33.1 Prior to the expiration of the period of bid validity, the Purchaser will notify the successful bidder in writing by registered letter or by cable/telex or fax, to be confirmed in writing by registered letter, that its bid has been accepted.
- 33.2 The notification of award will constitute the formation of the Contract.
- 33.3 Upon the successful Bidder's furnishing of performance security pursuant to ITB Clause 35, the Purchaser will promptly notify the name of the winning bidder to each unsuccessful Bidder and will discharge its bid security, pursuant to ITB Clause 15.
- 33.4 If, after notification of award, a Bidder wishes to ascertain the grounds on which its bid was not selected, it should address its request to the Purchaser. The Purchaser will promptly respond in writing to the unsuccessful Bidder.

**34. Signing of Contract**

- 34.1 At the same time as the Purchaser notifies the successful bidder that its bid has been accepted, the Purchaser will send the bidder the Contract Form provided in the bidding documents, incorporating all agreements between the parties.
- 34.2 Within 21 days of receipt of the Contract Form, the successful bidder shall sign and date the Contract and return it to the Purchaser.

**35. Performance Security**

- 35.1 Within 21 days of the receipt of notification of award from the Purchaser, the successful Bidder shall furnish the performance security in accordance with the Conditions of Contract, in the Performance Security Form provided in the bidding documents or in another form acceptable to the Purchaser.
- 35.2 Failure of the successful bidder to comply with the requirement of ITB Clause 34.2 or ITB Clause 35.1 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event the Purchaser may make the award to the next lowest evaluated bidder or call for new bids.

**36. Corrupt or Fraudulent Practices**

- 36.1 The Bank requires that Borrowers (including beneficiaries of Bank loans), as well as Bidders, Suppliers, Contractors, and Consultants under Bank-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy, the Bank:
- (a) defines, for the purposes of this provision, the terms set forth below as follows:
    - (i) “corrupt practice” is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
    - (ii) “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
    - (iii) “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
    - (iv) “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
    - (v) “obstructive practice” is
      - (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or
      - (bb) acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under sub-clause 37.1(e) below.
  - (b) will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question;
  - (c) will cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of the loan engaged in corrupt, fraudulent, collusive or coercive practices during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to the Bank to remedy the situation;
  - (d) will sanction a firm or individual, including declaring them ineligible, either indefinitely or for a stated period of time, to be awarded a Bank-financed contract if it at any time determines that they have, directly or through an agent, engaged, in corrupt, fraudulent, collusive or coercive practices in competing for, or in executing, a Bank-financed contract; and
  - (e) will have the right to require that a provision be included in Bidding Documents and in contracts financed by a Bank loan, requiring Bidders, Suppliers, Contractors and Consultants to permit the Bank to inspect their accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by the Bank.
- 36.2 Furthermore, Bidders shall be aware of the provision stated in sub-clause 24.1 of the General Conditions of Contract.

**SECTION III: GENERAL CONDITIONS OF CONTRACT**

**SECTION III: GENERAL CONDITIONS OF CONTRACT**  
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## General Conditions of Contract

### 1. Definitions

1.1 In this Contract, the following terms shall be interpreted as indicated:

- (a) "The Contract" means the agreement entered into between the Purchaser and the Supplier, as recorded in the Contract Form signed by the parties, including all the attachments and appendices thereto and all documents incorporated by reference therein;
- (b) "The Contract Price" means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations;
- (c) "The Goods" means all the equipment, machinery, and/or other materials which the Supplier is required to supply to the Purchaser under the Contract;
- (d) "Services" means services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training and other obligations of the Supplier covered under the Contract;
- (e) "GCC" means the General Conditions of Contract contained in this section.
- (f) "SCC" means the Special Conditions of Contract.
- (g) "The Purchaser" means the organization purchasing the Goods, as named in SCC.
- (h) "The Purchaser's country" is the country named in SCC.
- (i) "The Supplier" means the individual or firm supplying the Goods and Services under this Contract.
- (j) "The World Bank" means the International Bank for Reconstruction and Development (IBRD) or the International Development Association (IDA).
- (k) "The Project Site", where applicable, means the place or places named in SCC.
- (l) "Day" means calendar day.

### 2. Application

2.1 These General Conditions shall apply to the extent that they are not superseded by provisions in other parts of the Contract.

### 3. Country of Origin

3.1 All Goods and Services supplied under the Contract shall have their origin in the member countries and territories eligible under the rules of the World Bank as further elaborated in SCC.

3.2 For purposes of this Clause "origin" means the place where the Goods are mined, grown or produced, or from which the Services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembling of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.

3.3 The origin of Goods and Services is distinct from the nationality of the Supplier.

### 4. Standards

4.1 The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standard appropriate to the Goods' country of origin and such standards shall be the latest issued by the concerned institution.

### 5. Use of Contract Documents and Information

- 5.1 The Supplier shall not, without the Purchaser's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Purchaser in connection therewith, to any person other than a person employed by the Supplier in performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.
- 5.2 The Supplier shall not, without the Purchaser's prior written consent, make use of any document or information enumerated in GCC Clause 5.1 except for purposes of performing the Contract.
- 5.3 Any document, other than the Contract itself, enumerated in GCC Clause 5.1 shall remain the property of the Purchaser and shall be returned (in all copies) to the Purchaser on completion of the Supplier's performance under the Contract if so required by the Purchaser.

## **6. Patent Rights**

- 6.1 The Supplier shall indemnify the Purchaser against all third-party claims of infringement of patent, trademark or industrial design rights arising from use of the Goods or any part thereof in India.

## **7. Performance Security**

- 7.1 Within 21 days of receipt of the notification of contract award, the Supplier shall furnish performance security in the amount specified in SCC.
- 7.2 The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- 7.3 The Performance Security shall be denominated in Indian Rupees and shall be in one of the following forms:
  - (a) A Bank guarantee or irrevocable Letter of Credit, issued by a nationalized/scheduled bank located in India or a bank located abroad acceptable to the Purchaser, in the form provided in the bidding documents or another form acceptable to the Purchaser; or
  - (b) A cashier's check, certified check, or demand draft.
- 7.4 The performance security will be discharged by the Purchaser and returned to the Supplier not later than 30 days following the date of completion of the Supplier's performance obligations, including any warranty obligations, unless specified otherwise in SCC.

## **8. Inspections and Tests**

- 8.1 The Purchaser or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Purchaser. SCC and the Technical Specifications shall specify what inspections and tests the Purchaser requires and where they are to be conducted. The Purchaser shall notify the Supplier in writing in a timely manner of the identity of any representatives retained for these purposes.
- 8.2 The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at point of delivery and/or at the Goods final destination. If conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production data - shall be furnished to the inspectors at no charge to the Purchaser.
- 8.3 Should any inspected or tested Goods fail to conform to the specifications, the Purchaser may reject the goods and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Purchaser.
- 8.4 The Purchaser's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival at Project Site shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Purchaser or its representative prior to the Goods shipment.

8.5 Nothing in GCC Clause 8 shall in any way release the Supplier from any warranty or other obligations under this Contract.

## **9. Packing**

9.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

9.2 The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be provided for in the Contract including additional requirements, if any, specified in SCC and in any subsequent instructions ordered by the Purchaser.

## **10. Delivery and Documents**

10.1 Delivery of the Goods shall be made by the Supplier in accordance with the terms specified by the Purchaser in the Notification of Award. The details of shipping and/or other documents to be furnished by the supplier are specified in SCC.

## **11. Insurance**

11.1 The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in SCC.

## **12. Transportation**

12.1 Deleted.

12.2 Deleted.

12.3 Where the Supplier is required under the Contract to transport the Goods to a specified place of destination within India defined as Project site, transport to such place of destination in India including insurance, as shall be specified in the Contract, shall be arranged by the Supplier, and the related cost shall be included in the Contract Price.

12.4 Deleted

## **13. Incidental Services**

13.1 The supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:

- (a) performance or supervision of the on-site assembly and/or start-up of the supplied Goods;
- (b) furnishing of tools required for assembly and/or maintenance of the supplied Goods;
- (c) furnishing of detailed operations and maintenance manual for each appropriate unit of supplied Goods;
- (d) 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 obligations under this Contract; and
- (e) 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.

13.2 Prices charged by the Supplier for incidental services, if not included in the Contract Price for the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

## **14. Spare Parts**

- 14.1 As specified in the SCC, the Supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:
- (a) such spare parts as the Purchaser may elect to purchase from the Supplier, providing that this election shall not relieve the Supplier of any warranty obligations under the Contract; and
  - (b) In the event of termination of production of the spare parts:
    - (i) advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements; and
    - (ii) following such termination, furnishing at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts, if requested.

## **15. Warranty**

- 15.1 The Supplier warrants that the Goods supplied under this Contract are new, unused, of the most recent or current models and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that all Goods supplied under this Contract shall have no defect arising from design, materials or workmanship (except when the design and/or material is required by the Purchaser's Specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.
- 15.2 This warranty shall remain valid for 12 months after the Goods or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the Contract, or for 18 months after the date of shipment from the place of loading whichever period concludes earlier, unless specified otherwise in the SCC.
- 15.3 The Purchaser shall promptly notify the Supplier in writing of any claims arising under this warranty.
- 15.4 Upon receipt of such notice, the Supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective Goods or parts thereof, without cost to the Purchaser other than, where applicable, the cost of inland delivery of the repaired or replaced Goods or parts from ex-works or ex-factory or ex-showroom to the final destination.
- 15.5 If the Supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, the Purchaser may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

## **16. Payment**

- 16.1 The method and conditions of payment to be made to the Supplier under this Contract shall be specified in the SCC.
- 16.2 The Supplier's request(s) for payment shall be made to the Purchaser in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and the Services performed, and by documents, submitted pursuant to GCC Clause 10, and upon fulfillment of other obligations stipulated in the contract.
- 16.3 Payments shall be made promptly by the Purchaser but in no case later than sixty (60) days after submission of the invoice or claim by the Supplier.
- 16.4 Payment shall be made in Indian Rupees.

## **17. Prices**

- 17.1 Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any price adjustments authorized in SCC or in the Purchaser's request for bid validity extension, as the case may be.

## **18. Change Orders**

- 18.1 The Purchaser may at any time, by written order given to the Supplier pursuant to GCC Clause 31, make changes within the general scope of the Contract in any one or more of the following:
- (a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
  - (b) the method of shipping or packing;
  - (c) the place of delivery; and/or
  - (d) the Services to be provided by the Supplier.
- 18.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this clause must be asserted within thirty (30) days from the date of the Supplier's receipt of the Purchaser's change order.

### **19. Contract Amendments**

- 19.1 Subject to GCC Clause 18, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

### **20. Assignment**

- 20.1 The Supplier shall not assign, in whole or in part, its obligations to perform under the Contract, except with the Purchaser's prior written consent.

### **21. Subcontracts**

- 21.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under this Contract if not already specified in the bid. Such notification, in his original bid or later, shall not relieve the Supplier from any liability or obligation under the Contract.
- 21.2 Subcontracts must comply with the provisions of GCC Clause 3.

### **22. Delays in the Supplier's Performance**

- 22.1 Delivery of the Goods and performance of the Services shall be made by the Supplier in accordance with the time schedule specified by the Purchaser in the Schedule of Requirements.
- 22.2 If at any time during performance of the Contract, the Supplier or its sub-contractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may, at its discretion, extend the Supplier's time for performance with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of the Contract.
- 22.3 Except as provided under GCC Clause 25, a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 23, unless an extension of time is agreed upon pursuant to GCC Clause 22.2 without the application of liquidated damages.

### **23. Liquidated Damages**

- 23.1 Subject to GCC Clause 25, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the Percentage specified in SCC. Once the maximum is reached, the Purchaser may consider termination of the Contract pursuant to GCC Clause 24.

## **24. Termination for Default**

- 24.1 The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Supplier, terminate the Contract in whole or part:
- (a) if the Supplier fails to deliver any or all of the Goods within the period(s) specified in the Contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause 22; or
  - (b) if the Supplier fails to perform any other obligation(s) under the Contract.
  - (c) if the Supplier, in the judgment of the Purchaser has engaged in fraud and corruption, as defined in GCC Clause 34, in competing for or in executing the Contract.
- 24.2 In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 24.1, the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the Purchaser for any excess costs for such similar Goods or Services. However, the Supplier shall continue the performance of the Contract to the extent not terminated.

## **25. Force Majeure**

- 25.1 Notwithstanding the provisions of GCC Clauses 22, 23, 24, the Supplier shall not be liable for forfeiture of its performance security, liquidated 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.
- 25.2 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.
- 25.3 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.

## **26. Termination for Insolvency**

- 26.1 The Purchaser may at any time terminate the Contract by giving written notice to the Supplier, if the Supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Purchaser.

## **27. Termination for Convenience**

- 27.1 The Purchaser, by written notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
- 27.2 The Goods that are complete and ready for shipment within 30 days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:
- (a) to have any portion completed and delivered at the Contract terms and prices; and/or
  - (b) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and for materials and parts previously procured by the Supplier.

## **28. Settlement of Disputes**

- 28.1 The Purchaser and the supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.
- 28.2 If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given.
- 28.2.1 Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract.
- 28.2.2 Arbitration proceedings shall be conducted in accordance with the rules of procedure specified in the SCC.
- 28.3 Notwithstanding any reference to arbitration herein,
- (a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and
- (b) the Purchaser shall pay the Supplier any monies due the Supplier.

## **29. Limitation of Liability**

- 29.1 Except in cases of criminal negligence or willful misconduct, and in the case of infringement pursuant to Clause 6,
- (a) the Supplier shall not be liable to the Purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser; and
- (b) the aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

## **30. Governing Language**

- 30.1 The contract shall be written in English language. Subject to GCC Clause 30, English language version of the Contract shall govern its interpretation. All correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.

## **31. Applicable Law**

- 31.1 The Contract shall be interpreted in accordance with the laws of the Union of India.

## **32. Notices**

- 32.1 Any notice given by one party to the other pursuant to this Contract shall be sent to other party in writing or by cable, telex or facsimile and confirmed in writing to the other Party's address specified in SCC.
- 32.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

## **33. Taxes and Duties**

- 33.1 Deleted.
- 33.2 Suppliers shall be entirely responsible for all taxes, duties, license fees, octroi, road permits, etc., incurred until delivery of the contracted Goods to the Purchaser.

## **34. Fraud and Corruption**

- 34.1 The Bank requires that Borrowers (including beneficiaries of Bank loans), as well as Bidders, Suppliers, Contractors, and Consultants under Bank-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy, the Bank:
- (a) defines, for the purposes of this provision, the terms set forth below as follows:
    - (i) “corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;
    - (ii) “fraudulent practice” means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;
    - (iii) “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of the borrower, designed to establish bid prices at artificial, non competitive levels; and
    - (iv) “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract;
    - (v) “obstructive practice” is
      - (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or
      - (bb) acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under sub-clause 37.1(e) below.
  - (b) will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question;
  - (c) will cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of the loan engaged in corrupt, fraudulent, collusive, or coercive practices during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to the Bank to remedy the situation;

(d) will sanction a firm or individual, including declaring them ineligible, either indefinitely or for a stated period of time, to be awarded a Bank-financed contract if it at any time determines that they have, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for, or in executing, a Bank-financed contract; and

(e) will have the right to require that a provision be included in bidding documents and in contracts financed by a Bank Loan, requiring bidders, suppliers, contractors and consultants to permit the Bank to inspect their accounts and records and other documents relating to the Bid submission and contract performance and to have them audited by auditors appointed by the Bank.

**SECTION IV: SPECIAL CONDITIONS OF CONTRACT**

**SECTION IV: SPECIAL CONDITIONS OF CONTRACT**

**TABLE OF CLAUSES**

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**Special Conditions of Contract**

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract. The corresponding clause number of the General Conditions is indicated in parentheses.

1. **Definitions (GCC Clause 1)**

(a) The Purchaser is **State Project Director ( SPIU) Vocational Training Implementation Project cum Director of Technical Education & Industrial Training, Punjab, Plot No 1-A, Sector-36 A, Chandigarh-160036**

(b) The Supplier is : .....

2. **Country of Origin (GCC Clause 3)**

All countries and territories as indicated in Section XIV of the bidding documents, "Eligibility for the Provisions of Goods, Works, and Services in Bank-Financed Procurement".

3. **Performance Security (GCC Clause 7)**

3.1 Within 21 days after the Supplier's receipt of Notification of Award, the Supplier shall furnish Performance Security to the Purchaser for an amount of 5% of the contract value, valid upto 60 days after the date of completion of performance obligations including warranty obligations.

In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected/replaced material shall be extended to a further period of 12 months and the Performance Bank Guarantee for proportionate value shall be extended 60 days over and above the extended warranty period.

3.2 Substitute Clause 7.3 (b) of the GCC by the following:

A cashier's cheque or banker's certified cheque or crossed demand draft or pay order drawn in favour of

**Finance Officer, Finance Unit (SPIU), Deptt. Of Industrial Training, Punjab, Chandigarh**

3.3 Substitute Clause 7.4 of the GCC by the following:

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 obligation, under the contract.

3.4 Add as Clause 7.5 to the GCC the following:

In the event of any contract amendment, the Supplier shall, within 21 days of receipt of such amendment, furnish the amendment to the Performance Security, rendering the same valid for the duration of the Contract, as amended for 60 days after the completion of performance obligations including warranty obligations.

4. **Inspection and Tests (GCC Clause 8)**

The following inspection procedures and tests are required by the Purchaser:

**1) Geometrical Test & Practical Test should be carried out as per Indian Standard/ ISO Standard.**

**2) 100% Pre-Dispatch Inspection will be carried out by the representative of this Directorate or by third party to be decided by this office.**

5. **Packing (GCC Clause 9)**

Add as Clause 9.3 of the GCC the following:

Packing Instructions : The Supplier will be required to make separate packages for each Consignee. Each package will be marked on three sides with proper paint/indelible ink, the following:

i) Project ii) Contract No. iii) Country of Origin of Goods iv) Supplier's Name, and v) Packing list reference number.

**6. Delivery and Documents (GCC Clause 10)**

Upon delivery of the Goods, the supplier shall notify the purchaser and the insurance company by cable/telex/fax the full details of the shipment including contract number, railway receipt number and date, description of goods, quantity, name of the consignee etc. The supplier shall mail the following documents to the purchaser with a copy to the insurance company:

- (i) 6 Copies of the Supplier invoice showing contract number, goods' description, quantity, unit price, total amount;
- (ii) Railway receipt/acknowledgment of receipt of goods from the consignee(s);
- (iii) 6 Copies of packing list identifying the contents of each package;
- (iv) Insurance Certificat ;
- (v) Manufacturer's/Supplier's warranty certificate;
- (vi) Inspection Certificate issued by the nominated inspection agency, and the Supplier's factory inspection report; and
- (vii) Certificate of Origin.

The above documents shall be received by the Purchaser before arrival of the Goods (except where the Goods have been delivered directly to the Consignee with all documents) and, if not received, the Supplier will be responsible for any consequent expenses.

**7. Insurance ( GCC Clause 11)**

For delivery of goods at site, the insurance shall be obtained by the Supplier in an amount equal to 110% of the value of the goods from "warehouse to warehouse" (final destinations) on "All Risks" basis including War Risks and Strikes.

**8. Incidental Services (GCC Clause 13)**

The following services covered under Clause 13 shall be furnished and the cost shall be included in the contract price: The Bidder will provide 2 days training after installation of equipment at the ITI to the Technicians which would include general maintenance tips, sample model/works.

**9. Spare Parts (GCC Clause 14)**

Add as Clause 14.2 to the GCC the following:

Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spares for the Goods, such as gaskets, plugs, washers, belts etc. Other spare parts and components shall be supplied as promptly as possible but in any case within six months of placement of order.

**10. Warranty (GCC Clause 15)**

- (i) G.C.C. Clause 15.2:

In partial modification of the provisions, the warranty period shall be **12** months from date of acceptance of Goods or **18** months from the dates of Shipment, whichever occurs later. The Supplier shall, in addition, comply with the performance and/or consumption guarantees specified under the contract. If for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall at its discretion either:

- (a) make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests in accordance with SCC 4 ;

*[The rate should be higher than the adjustment rate used in the bid evaluation under ITB 26.5(f) or (g)]*

- (ii) Substitute Clause 15.4 of the GCC by the following:

“Upon receipt of such notice, the Supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective goods or parts thereof, free of cost at the ultimate destination. The Supplier shall take over the replaced parts/goods at the time of their replacement. No claim whatsoever, shall lie on the Purchaser for the replaced parts/goods thereafter.

In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected/replaced material shall be extended to a further period of 12 months.”

- (iii) GCC Clauses 15.4 and 15.5:

The period for correction of defects in the warranty period is **20** days.

**11. Payment (GCC Clause 16)**

Payment for Goods and Services shall be made in Indian Rupees as follows:

- (i) *On Delivery*: Ninty percent of the contract price shall be paid on receipt of Goods and upon submission of the documents specified in SCC Clause 6 above; and
- (ii) *On Final Acceptance*: the remaining ten percent of the Contract Price shall be paid to the supplier within 30 days after the date of the acceptance certificate issued by the Purchaser’s representative for the respective delivery.

**12. Prices (GCC Clause 17)**

17.1 Prices payable to the Supplier as stated in the Contract shall be subject to adjustment during performance of the Contract

**13. Sub-contracts (GCC Clause 21)**

Add at the end of GCC sub-clause 21.1 the following:

Sub-contract shall be only for bought-out items and sub-assemblies

**14. Liquidated Damages (GCC Clause 23)**

14.1 For delays :

GCC Clause 23.1 -- The applicable rate is 0.5% per week and the maximum deduction is 10% of the contract price.

**15. Settlement of Disputes (Clause 28)**

The dispute settlement mechanism to be applied pursuant to GCC Clause 28.2.2 shall be as follows:

- (a) In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Arbitration and Conciliation Act, 1996. The arbitral tribunal shall consist of 3

arbitrators one each to be appointed by the Purchaser and the Supplier. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties and shall act as Presiding arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the Indian Council of Arbitration.

- (b) In the case of a dispute with a Foreign Supplier, the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules. The Arbitral Tribunal shall consist of three Arbitrators one each to be appointed by the Purchaser and the Supplier. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties, and shall act as presiding arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the Indian Council of Arbitration.
- (c) If one of the parties fails to appoint its arbitrator in pursuance of sub-clause (a) and (b) above, within 30 days after receipt of the notice of the appointment of its arbitrator by the other party, then the Indian Council of Arbitration both in cases of the Foreign supplier as well as Indian supplier, shall appoint the arbitrator. A certified copy of the order of the Indian Council of Arbitration making such an appointment shall be furnished to each of the parties.
- (d) Arbitration proceedings shall be held at **Chandigarh**, India, and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English.
- (e) The decision of the majority of arbitrators shall be final and binding upon both parties. The cost and expenses of Arbitration proceedings will be paid as determined by the arbitral tribunal. However, the expenses incurred by each party in connection with the preparation, presentation etc. of its proceedings as also the fees and expenses paid to the arbitrator appointed by such party or on its behalf shall be borne by each party itself.
- (f) Where the value of the contract is Rs. 10 million and below, the disputes or differences arising shall be referred to the Sole Arbitrator. The Sole Arbitrator should be appointed by agreement between the parties; failing such agreement, by the appointing authority namely the Indian Council of Arbitration.

16. **Notices (Clause 32)**

For the purpose of all notices, the following shall be the address of the Purchaser and Supplier.

Purchaser:           **State Project Director(SPIU) (VTIP) cum,  
 Directorate of Technical Education & Industrial  
 Training, Punjab, Takniki Sikhia  
 Bhawan, (I.T.Wing) ,Room No 304,  
 3<sup>rd</sup> Floor, Plot No 1-A, Sector-36 A,  
 Chandigarh-160036  
 Ph.No. (0172) 2614031, 2648012,  
 Fax. No. (0172) 2614622  
 E-mail : ditpb\_coe\_pu@yahoo.com  
 js\_ddm@yahoo.com**

Supplier: (To be filled in at the time of Contract signature)

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

17. Supplier shall regularly intimate progress of supply, in writing, to the Purchaser as under\*:

- Quantity offered for inspection and date;
- Quantity accepted/rejected by inspecting agency and date;

- Quantity despatched/delivered to consignees and date;
- Quantity where incidental services have been satisfactorily completed with date;
- Quantity where rectification/repair/replacement effected/completed on receipt of any communication from consignee/Purchaser with date;
- Date of completion of entire Contract including incidental services, if any; and
- Date of receipt of entire payments under the Contract  
(in case of stage-wise inspection, details required may also be specified).

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\* Delete whichever inapplicable

**SECTION V: SCHEDULE OF REQUIREMENTS**

**SCHEDULE OF REQUIREMENTS**

<b>Sched ule No</b>	<b>Description</b>	<b>Quanti ty</b>	<b>Delivery Schedule within</b>	<b>Bid Security</b>
1.	Air brake assembly.	2 Nos.	3 Months	300/-
2.	Chassis of heavy commercial motor vehicle, with all accessories in working condition.	2 Nos.	3 Months	14,000/-
3.	Conventional front excel wheel assembly.	2 Nos.	3 Months	18,000/-
4.	Cut model of 2 stroke Petrol engine on stand.	4 Nos.	3 Months	1,200/-
5.	Cut model of 4 stroke diesel engine on stand	4 Nos.	3 Months	6,500/-
6.	Cut model of 4 stroke petrol engine on stand	4 Nos.	3 Months	4,000/-
7.	Cut-Section model of a sliding mesh gear box	2 Nos	3 Months	800/-
8.	Cut-Section model of a synchromesh gear box	2 Nos	3 Months	1,000/-
9.	Cut-Section model of differential assembly	2 Nos	3 Months	1,000/-
10.	Diaphragm type Clutch	4 Nos	3 Months	1,200/-
11.	Diesel engine (4 stroke, Multi Cylinder) of different makes in running condition.	8 Nos	3 Months	9,600/-
12.	Diesel engine 4 stroke for practice, up to 80 H.P.	8 Nos	3 Months	13,000/-
13.	Diesel engine 4 stroke up to 10HP/80HP running condition	2 Nos	3 Months	2,000/-
14.	Diesel Engines of latest models of vehicles	4 Nos	3 Months	28,000/-
15.	Drum brake assembly	8 Nos	3 Months	4,000/-
16.	Engine control sensors 8 types	4 each	3 Months	10,000/-
17.	Engine analyzer/ Smoke Testing Machine.	4 Nos	3 Months	16,000/-
18.	Engine Scanner	2 Nos	3 Months	20,000/-
19.	Engines 4 cylinder petrol MPFI other than procured under module 101 and 02.	1 No.	3 Months	3,000/-
20.	Engines four cylinder diesel engine other than procured under module 101 and 02	1 No.	3 Months	5,000/-

21	Fuel injection pump test bench with accessories	1 No.	3 Months	6,000/-
22	Gear box with differential (Transaxle)	2 Nos	3 Months	3,000/-
23	Hydraulic brake assembly. (Brake pedal, booster, Tandem master cylinder, wheel cylinder, brake drum – mock up assembly)	2 Nos	3 Months	2,000/-
24	Petrol engine 4 stroke fitted with MPFI / carburetor fuel system upto 50 HP	4 Nos	3 Months	3,200/-
25	Petrol engine of latest model (CNG engine) with workshop manuals	2 Nos	3 Months	2,400/-
26	Petrol Engines of cars of latest models with manuals	4 Nos	3 Months	6,400/-
27	Rear axle assembly complete with drive shafts and brake drums (full floating, semi floating type and ¼ floating)	2 Nos	3 Months	2,000/-
28	Synchromesh gear box of LCV	8 Nos	3 Months	10,500/-
29	Spark plug cleaner and tester similar to Bosch / champion.	4 Nos	3 Months	1,500/-
30	Tyre remover pneumatic & mechanical type.	2 set	3 Months	1,100/-
31	Tyre retreading machine with accessory	1 No	3 Months	3,000/-
32	Tyre vulcanizing machine	2 Nos	3 Months	4,000/-
33	Vacuum assisted hydraulic brake assembly	2 Nos	3 Months	2,500/-
34	Wheel alignment gauge	2 Nos	3 Months	1,500/-
35	Wheel balancing machine with accessory	3 set	3 Months	24,000/-

**The date of Contract awarded will be the date of delivery schedule to be started.**

**List of consignees where the equipments are to be delivered.**

Schedule No	Description.	Location of Consignee Govt. Industrial Training Institute in		Total Qty
		Moga	Batala	
1.	Air brake assembly.	1 No.	1 No.	2 Nos.
2.	Chassis of heavy commercial motor vehicle, with all accessories in working condition.	1 No.	1 No.	2 Nos.
3.	Conventional front excel wheel assembly.	1 No.	1 No.	2 Nos.
4.	Cut model of 2 stroke Petrol engine on stand.	2 Nos.	2 Nos.	4 Nos.
5.	Cut model of 4 stroke diesel engine on stand	2 Nos.	2 Nos.	4 Nos.
6.	Cut model of 4 stroke petrol engine on stand	2 Nos.	2 Nos.	4 Nos.
7.	Cut-Section model of a sliding mesh gear box	1 No.	1 No.	2 Nos
8.	Cut-Section model of a synchromesh gear box	1 No.	1 No.	2 Nos
9.	Cut-Section model of differential assembly	1 No.	1 No.	2 Nos
10.	Diaphragm type Clutch	2 Nos	2 Nos	4 Nos
11.	Diesel engine (4 stroke, Multi Cylinder) of different makes in running condition.	4 Nos	4 Nos	8 Nos
12	Diesel engine 4 stroke for practice, up to 80 H.P.	4 Nos	4 Nos	8 Nos
13	Diesel engine 4 stroke up to 10HP/80HP running condition	1 No.	1 No.	2 Nos
14	Diesel Engines of latest models of vehicles	2 Nos	2 Nos	4 Nos
15	Drum brake assembly	4 Nos	4 Nos	8 Nos
16	Engine control sensors 8 types	2 each	2 each	4 each
17	Engine analyzer/ Smoke Testing Machine.	2 Nos	2 Nos	4 Nos
18	Engine Scanner	1 No.	1 No.	2 Nos
19	Engines 4 cylinder petrol MPFI other than procured under module 101 and 02.	1 No.	----	1 No.
20	Engines four cylinder diesel engine other than procured under module 101 and 02	1 No.	----	1 No.

21	Fuel injection pump test bench with accessories	1 No.	----	1 No.
22	Gear box with differential (Transaxle)	1 No.	1 No.	2 Nos
23	Hydraulic brake assembly. (Brake pedal, booster, Tandem master cylinder, wheel cylinder, brake drum – mock up assembly) break pedal booster tendam master cylinder, wheel cylinder , break drum mock up assembling engine	1 No.	1 No.	2 Nos
24	Petrol engine 4 stroke fitted with MPFI / carburetor fuel system upto 50 HP	2 Nos	2 Nos	4 Nos
25	Petrol engine of latest model (CNG engine) with workshop manuals	1 No.	1 No.	2 Nos
26	Petrol Engines of cars of latest models with manuals	2 Nos	2 Nos	4 Nos
27	Rear axle assembly complete with drive shafts and brake drums (full floating, semi floating type and ¼ floating)	1 No.	1 No.	2 Nos
28	Synchromesh gear box of LCV	4 Nos	4 Nos	8 Nos
29	Spark plug cleaner and tester similar to Bosch / champion.	2 Nos	2 Nos	4 Nos
30	Tyre remover pneumatic & mechanical type.	1 set	1 set	2 set
31	Tyre retreading machine with accessory	1 No.	----	1 No
32	Tyre vulcanizing machine	1 No.	1 No.	2 Nos
33	Vacuum assisted hydraulic brake assembly	1 No.	1 No.	2 Nos
34	Wheel alignment gauge	1 No.	1 No.	2 Nos
35	Wheel balancing machine with accessory	2 set	1 set	3 set

## Specifications

### 1. AIR BRAKE ASSEMBLY

- The Air Brake Assembly SHOULD be mounted on vertical stand.
- Only one Front drum SHOULD be cut-out show the working parts.
- Front drum run by hand operated.
- Rear brake assembly (without drum) in Brake plate, brake shoe with liner to show working of brake.
- Air Compressor (Vehicular type) driven by electric motor.
- Some parts of brake assembly SHOULD be coated with attractive color for batter understanding.
- Assembly SHOULD be provided with bellow stated parts stationary & moving parts to make it working model.

1. Air Compressor (Vehicular)
2. Air Dryer with Unload Valve.
3. Protection Valve.
4. Dual Break Valve.
5. Graduated hand Control Valve
6. Spring Brake Actuator
7. Brake Chamber
8. Air Tank
9. Air Pressure Gauge
10. Pressure pipe assembly
11. Low pressure indicator switch.
12. Brake Light Switch.
13. Stop Light.
14. Transformer.
15. Brake pedal
16. Stub axle.
17. Brake Drum Assembly (one front)

Manual SHOULD be provided .

### 2. CHASSIS OF HEAVY COMMERCIAL MOTOR VEHICLE, WITH ALL ACCESSORIES IN WORKING CONDITION.

Motorized actual working cut sectioned of engine, Clutch, Gearbox, propeller shaft & Differential mounted on Chassis. The cutting SHOULD be enabling the working Parts visible i.e Engine, F.I. Pump, Clutch, Gears & Synchronized unit. Propeller shaft, differential Crown Wheel & Pinion. Assembly and other etc.

Suitable Electric motor drives with Reduction gear to be provided understand working of gear & Differential mounted on Chassis.

The Engine, clutch, Gearbox, propeller shaft & Differential SHOULD be cut in such a way to demonstrate bellow stated parts movable & stationary parts.

1. Chassis
2. Engine
3. Fuel injection pump
4. Clutch
5. Gears.
6. Propeller Shaft
7. Differential assembly
8. Steering assembly
9. Fuel tank
10. Suspension system.
11. Radiator
12. Front & Rear Axle Assembly
13. Tyre & Wheels
14. Suitable Electric Motor with Reduction Gear Box (with V-belt.Pulley)

- Some parts of Chassis assembly SHOULD be coated with attractive color for better understanding.
- Whole unit SHOULD be mounted on Suitable stand.
- Manual SHOULD be provided.

### **3. CONVENTIONAL FRONT AXLE WHEEL ASSEMBLY**

- The Assembly SHOULD be mounted on Suitable Stand.
- Axle Assembly SHOULD be coated with attractive color for better understanding.
- Drum SHOULD be cut-out to show the internal components in working parts.

### **4. CUT MODEL OF 2 STROKE PETROL ENGINE ON STAND**

- A two stroke single cylinder petrol engine SHOULD be cut to show internal detail as piston, connecting rod, crank shaft, inlet port, transfer port & Exhaust port, gearbox, brake, etc.
- The cut section Should be colored properly & the model should be hand and kick drive for its working operational movement.
- The Engine should be cut in such a way to demonstrate to bellow stated moveable & stationary parts.

1. Piston
2. Connecting rod
3. Crank Shaft
4. Cylinder block & head
5. Silencer
6. Carburetors
7. Gear box

#### 8. Clutch unit

- Internal component such some gear should be chrome plated.
- Some parts of engine should be colored.
- The cut section should on suitable stand.
- Manual should be provided.

### **5. CUT MODEL OF 4 STROKE DIESEL ENGINE ON STAND.**

- Four stroke four cylinder diesel engine mounted on sturdy stand. The Cutting SHOULD enable the working parts visible i.e connecting rod, piston, valve spring, pump, crankshaft, Timing gear/chain etc.
- Internal components such as timing gears, Rocker arm, push rod, inlet valve & outlet valves SHOULD be chrome plated.
- Cooling system in sectional radiator, water pump, elbow, water jackets.
- Lubricating System in sectional oil pump, oil filter, oil chamber.
- Fuel supply system in sectional fuel injection pump, injector, air cleaner, intake manifold.
- Exhaust system in sectional exhaust manifold, silencer.
- Electrical system in sectional starter & Alternator.
- Show bellow stated parts movable & stationary.

1. Cylinder head
  2. Engine Block
  3. Piston, Rings and connecting rod
  4. Rocker shaft assembly
  5. Crank shaft
  6. Timing gear/Chain
  7. Fly Wheel.
  8. Valves
- > Suitable Electric motor drive with reduction gear to be provided to under stand working of engine.
  - > Necessary parts of engine SHOULD be attractive colors for better
  - > Whole assembly SHOULD mounted on suitable stand.
  - > Manual SHOULD be provided.

### **6. CUT MODEL OF 4 STROKE PETROL ENGINE ON STAND**

- Cut Sectional 4 stroke 4 cylinder petrol engine mounted on sturdy stand and working.
- The cutting should enable the stationery & working part visible i.e. connecting rod, Piston, valve springs, Ignition coil, oil filter, timing gear/ chain, distributor,radiator,silencer, air cleaner, etc.
- Suitable Electric Motor drive with gear reduction is provided to understand working of engine.
- Cut section of Head to see the closing & opening of input &outlet valves.
- Internal components such as Rocker arm, push rod, inlet valve & outlet valves should be chrome plated.
- Cooling system in sectional radiator, water pump, elbow.
- Lubrication System in sectional oil pump, oil filter, oil chamber.

- Ignition system in sectional Distributer, ignition coil, spark plug.
- Fuel Supply system in sectional carburetor, feed pump, air cleaner, intake manifold.
- Exhaust system in sectional exhaust manifold & alternator.
- Electrical system in sectional starter & alternator.
- some parts of engine should be colors for better understanding.
- The engine should be cut in such a way to demonstrate bellow stated parts movable & stationary parts.

1. Cylinder head
  2. Engine block
  3. Piston, Piston rings & Connecting rod.
  4. Rocker shaft assembly
  5. Crank Shaft
  6. Timing Gear/ Chain
  7. Fly Wheel
  8. Valves (Operation & Timing)
  9. Radiator
  10. Cooling Fan
  11. Tappet Cover
  12. Deep stick
- Manual should be provided.

## **7. CUT-SECTION MODEL OF A SLIDING MESH GEAR BOX**

### **Technical Specifications:**

- \* Cut Sectional model of sliding mesh Gear Box should be cut to visualize the gears and their movement input shaft and Lay shaft, etc.
- \* The Electric Motor should provide to driving shaft and working of gear box can be shown for power transmission "V" belt and pulleys should be used to avoid slip.
- \*Internal components such as all gears should be hard chrome plated.
- \*All the parts of Gearbox Should be coated with attractive colors for better understanding.
- \* Manual should be provided.
- \* Whole unit should be mounted on MS Frame

## **8. CUT SECTION MODEL OF A SYNCHROMESH GEAR BOX**

### **Technical Specification:**

- \* A Motorized Synchronmesh gear bow should be cut to visualize the gears and their movement and input shaft, lay shaft, Etc.
- \* The Motor should provide to driving shaft and working of gear box can be shown.
- \* For power transmission "V" belt and pulley should be used.
- \* Internal components such as all gears should be hard chrome plated.
- \* Some parts of Gearbox Should be coated with attractive colors for better understanding.
- \* Manual should be provided.
- \* Whole unit Should be mounted on suitable stand

## **9.CUT SECTION MODEL OF DIFFERENTIAL ASSEMBLY**

**Technical Specification:**

- Hypoid drive differential assembly shown of crown wheel & pinion assembly, Sun & star gears.
- Suitable Electric Motor drive with gear reduction is provided to understand working of differential assembly.
- Internal components such as all gears should be hard chrome plated
- All the parts of differential assembly should be coated with attractive colors for better understanding.
- Whole unit should be mounted on duty MS frame.
- Manual should be provided.

**10. DIAPHRAGM TYPE CLUTCH ASSEMBLY**

- diaphragm type Clutch Assembly is demonstrated below stated parts.
- fly wheel
- Pressure plate
- Clutch disc/Plate.
- Release bearing & fork.
- Clutch assembly operated by Clutch pedal.
- With suitable stand.
- Manual Should be provided

**11. DIESEL ENGINE (4 STROKE, MULTI CYLINDER ) OF DIFFERENT MAKES IN RUNNING CONDITION****Technical Specification:**

Type: Indian 4 Stroke cycle water cooled inline diesel engine.

Engine valve layout : 4 cylinders in line with O.H. valve per cylinder.

Arrangement of cylinder :Inline

Piston Displacement: 1400 cc to 2000 cc

Max: Output (Bhp) : 30 to 60 Bhp at 4000-5000 Rpm

Torque: 40 to 80 Nm at 2500-3100 rpm

Fuel tank capacity: 30 lit to 40 lit

Fuel injection: Rotary pump

Ignition: Indirect injection with turbo

\* Complete Diesel Engine turbo assembly & all required accessories like Starting system, Fule feed system, cooling system, Charging system, Lubrication system.

- \*And Battery Starter Motor, Alternator, Fuel injection pump with feed pump, injector, fuel tank, fuel fitter, radiator, Cooling fan, oil fitter, oil pump etc. with working condition.
- \*Engine should be mounted on M.S. Sturdy frame having four wheels for easy shifting and a panel board fitted on a frame having cluster unit fitted in a panel board.
- \* Engine should be start from panel board by ignition switch and it should be in a running condition with speed controlled from panel board of Knob.
- \* Acrylic sheet should be provided at the back side of the panel board for easy see of wiring.
- \* Whole assembly should be mounted on suitable stand.
- \* Manual should be provided.

***Technical Specification:***

Type: Indian 4 Stroke cycle water cooled inline diesel engine.

Engine value layout : 4 cylinders in line with O.H. valve per cylinder.

Arrangement of cylinder :Inline

Piston Displacement: 1800 cc to 2300 cc

Max: Output (Bhp) : 80 to 120 Bhp at 4000-5000 Rpm

Torque: 80 to 125 Nm at 2500-3100 rpm

Fuel tank capacity: 30 lit to 40 lit

- \*Complete Diesel Engine assembly & all required accessories like Starting system, Fuel feed system, cooling system, Charging system, Lubrication system.
- \*And Battery Starter Motor, Alternator, Fuel injection pump with feed pump, injector, fuel tank, fuel fitter, radiator, Cooling fan, oil fitter, oil pump etc. with working condition.
- \*Engine should be mounted on M.S. Sturdy frame having four wheels for easy shifting and a panel board fitted on a frame having cluster unit fitted in a panel board.
- \* Engine should be start from panel board by ignition switch and it should be in a running condition with speed controlled from panel board of Knob.
- \* Acrylic sheet should be provided at the back side of the panel board for easy see of wiring.
- \* Whole assembly should be mounted on suitable stand.
- \* Manual should be provided.

**12. DIESEL ENGINE 4 STROKE FOR PRACTICE UP TO 80 HP**

- \* Complete Diesel Engine assembly & all required accessories like Starting system, Fuel feed system, cooling system, Charging system, Lubrication system.
- \*Battery Starter Motor, Alternator, Fuel injection pump with feed pump, injector, fuel tank, fuel fitter, radiator, Cooling fan, oil fitter, oil pump etc. with working condition.
- \*Engine should be mounted on M.S. Sturdy frame having four caster wheels for easy shifting and a panel board fitted on a frame having cluster unit fitted in a panel board.
- \* Acrylic sheet should be provided at the back side of the panel board for easy see of wiring.
- \* Engine should be start from panel board by ignition switch and it should be in a running condition with speed controlled from panel board of Knob.

**Engine Specification:**

1. Type	: 4 Stroke Cycle water cooled
2. Engine Valve Lay Out cylinder.	: 4 cylinders in line with two valve per
3. Arrangement of Cylinder	: In Line
4. Piston Displacement	: 1600cc to 2600 cc
5. Max. Output (Bhp)	: 50 to 80 Bhp at 3000-6000 RPM
6. Torque	: 10 to 20 KGM at 1500-3500 RPM
7. Fuel Tank Capacity	: 10 lit to 20 lit
8. Make	: Mahindra/Tata

### **13. DIESEL ENGINE 4 STROKE UP TO 10 HP /80 HP RUNNING CONDITION**

- Type: Indian 4 Stroke cycle water cooled inline diesel engine.
- Engine value layout : 4 cylinders in line with O.H. valve per cylinder.
- Arrangement of cylinder :Inline
- Piston Displacement: 1400 cc to 2000 cc
- Max: Output (Bhp) : 100 to 120 Bhp at 4000-5000 Rpm
- Torque: 80 to 125 Nm at 2500-3100 rpm
- Fuel tank capacity: 30 lit to 40 lit
- Fuel injection: Rotary pump
- Ignition : Indirect injection with turbo.
- Complete Diesel Engine turbo assembly & all required accessories like Starting system, Fuel feed system, cooling system, Charging system, Lubrication system.
- And Battery Starter Motor, Alternator, Fuel injection pump with feed pump, injector, fuel tank, fuel fitter, radiator, Cooling fan, oil fitter, oil pump etc. with working condition.
- Engine should be mounted on M.S. Sturdy frame having four wheels for easy shifting and a panel board fitted on a frame having cluster unit fitted in a panel board.
- Engine should be start from panel board by ignition switch and it should be in a running condition with speed controlled from panel board of Knob
- Acrylic sheet should be provided at the back side of the panel board for easy see of wiring.
- Whole assembly should be mounted on suitable stand.
- Manual Should be provided.

### **14.DIESEL ENGINES OF LATEST MODELS OF VEHICLES**

Complete Diesel Engine with CRDE Assembly with all required accessories : Starting System, Fuel Feed System, Cooling System, Charging System & Lubricating System.

1. Engine Should be mounted on MS Sturdy frame.
2. Engine should be started from Panel Board by ignition system.
3. Service Manual.

Engine Specifications :

- Type Four Stroke Cycle water cooled Diesel Engine.

- Engine Value layout: Four Cylinder Inline.
- Maximum Output: 100 to 120 BHP at 3000 to 6000 RPM.
- Fuel Capacity: 10 to 20 liters.
- Make: Toyota/Mahindra & Mahindra.

### **15. DRUM BRAKE ASSEMBLY**

- Drum Brake Assembly should be mounted on suitable vertical stand.
- Only One Front drum should be cut out show the working parts.
- Front Drum Assembly Driven by hand operated.
- Rear Brake assembly (without drum) in Brake plate, brake shoe with liner to show working of brake.
- Some parts of brake assembly should be coated with attractive color for batter understanding.
- Stop light working by transformer
- The assembly should be consisting of bellow, stated parts to make it working on vertical stand.
- Tandem master cylinder
- Brake oil container (Reservoir)
- Brake pipe line
- Brake pedal
- Brake drum assembly (one rear)
- Stop light Switch
- Tail Lamp
- Manual should be provided.

### **16. ENGINE CONTROL SENSORS 8 TYPES**

1. ECU
2. Absolute Pressure sensor,
3. Throttle Position Sensor
4. Intake Air Temperature Sensor an Pressure Sensor
5. Lambda Sensor
6. T.D.C. Sensor
7. Engine Idling Actuator
8. Engine Coolant temperature Sensor etc.

## 17. SMOKE TESTING MACHINE/ ENGINE ANALYZER

ARAI approved

Principal: Attenuation of light beam.

Measurement : Smoke density in Hartridge Units (HSU) & Light absorption coefficient (K) :

Temperature, RPM

**Range:**

HSU 0 ...100%

K 0... 8m-1

Temperature 0...128<sup>0</sup> C

Oil Temperature 30...110<sup>0</sup> C

RPM 0...6000 rpm

**Resolution:**

HSU 0.1%

K 0.01m

Temperature 1<sup>0</sup> C

•RPM should measure by dual facility.

•Pizzo Sensor & Battery Sensor

• Dual display facility (Main Unit) + additional Remote Control with display)

• RPM & Oil Temperature: Extension for long distance measurement

Light source : Halogen lamp, 12 V DC/20 W

Detector : Photocell with filters and focusing lens.

Display: Alphanumeric LCD display with backlight for day & night operation

Display size : 2X 16 Characters of size 5x7 mm

Keyboard: Membrane keypad, 18 Keys for user friendly operation.

Warm up Time : Measurement system : 5 Min

Smoke column heating : 20 to 30 min

Time Constant : Physical 0.4 sec,

Electrical 1 m sec.

Temperature sensor : RTD (pt 100)

Sampling Probe : 3 Probe of both Hartridge diameters along with synthetic rubber hose of length 4 m.

Calibration : using calibration filter of Known K, Autocal system for mid point check

Operating Temperature: 0.....50<sup>0</sup> C

Measuring Chamber Temper ....80<sup>0</sup> C

Power Supply : 90....270 V AC /11 ....12V DC.

#### ACCESSORIES

- Sampling probe ( 3 nos.)
- Sampling hose (4m)
- Calibration filter &
- Operating Manual

## ENGINE ANALYZER

### TECHNICAL SPECIFICATION:

#### ENGINE PARAMETERS :

- Engine Speed
  - IAC Flow Duty
  - Intake Air Temp
  - T P Sensor Volt
  - Throttle Position
  - MAP Sensor
  - Barometric Pressure
  - Fuel System
  - Injector Pulse width
  - O2 sensor
  - Short Fuel Trim
  - Long Fuel Trim
  - Total FT
  - Fuel Cut
  - Evap. Purge Valve
  - Fuel Pump
  - A/c Switch
  - A/c Mag Clutch
  - A/c Cont. Fan
  - Closed TP switch
- 
- System Configuration: OBD –I ; OBD-II (ISO 9141-2, ISO-14230, SAE J1850, KWP: Communication
  - Power: Cigar Lighter, Power Cable, AC/DC Adapter. Internal Battery- Max.2hrs
  - 256 MB in built memory
  - LCD backlit.Led backlit 320X240 resolution
  - Update via USB port
  - Connector Location
  - Auto Searching Mode
  - Current Data live
  - Graphic Function
  - Can check and analyze Petrol and Diesel Vehicle engine
  - Easy Key Pad Operation
  - Error message
  - Ignition timing advance
  - Desired Idle Speed
  - Battery Voltage
  - Radiator fan
  - Electric load
  - Coolant temperature

## **18. ENGINE SCANNER**

1. Communication protocol compatibility: OBD-II, (ISO 9141-5, SAE-J1850) KWP -2000, CAN BUS Communication support, SAE –J1857.
2. User interface: fast downloading, compact size, bright LED backlight.
3. Memory capacity: 256 MB built in memory (Max 1 GB).
4. LCD: LED backlight 320x240 resolutions, 40 columns x12 lines.
5. Keypad: soft touch Keypad type, total 25 keys button.
6. Dimension: 125x223x68/43 Weight: 0.5 kg main body. Dark Grey color High Strength ABS material.
7. Power consumption: 3.6 watts.
8. Operating Voltage: 7-36V DC input.
9. Operating Temperature: 0-50.
10. Internal Battery: Max 2 hr.
11. User friendly function: Connector location, Auto searching mode.
12. Scan Function: Current data, Flight record, Actuator (wherever applicable).
13. Vehicle Coverage:  
Asian software coverage:  
Hyundai, Daewoo, Toyota, Honda, Lexus, Mitsubishi, Nissan, Maruti –Suzuki, Isuzu, Daihatsu, Subaru, Mazda, Chevrolet (Captiva, Aveo, Optra), Tata (some).  
European s/w coverage: Mercedes, BMW, Opel, Audi, Ford, Fiat, Skoda, Volkswagen, Peugeot, Renault, etc.

## **19. ENGINE 4 CYLINDER PETROL MPFI OTHER THAN PROCURED UNDER MODULE 101 AND 02**

(MPFI FUEL SYSTEM)

- MPFI Four cylinder petrol engine having cubic capacity of 1100 to 1600 cc developing about 30 to 60 KW at 4000/6000 RPM water cooled.

- Multipoint fuel injection system complete with all required accessories like radiator with safe guard, fuel tank, alternator, battery, starter motor, cooling fan etc.
- Engine is mounted on M.s sturdy frame having four wheels for easy shifting and a panel board fitted on a frame having in cluster unit.
- Engine should start from panel board by ignition switch and it should be in a working condition with speed controlled from panel board.
- Engine is with all necessary sensors like
  1. ECU
  2. Absolute Pressure sensor,
  3. Throttle Position Sensor
  4. Intake Air Temperature Sensor
  5. Lambda Sensor
  6. Coolant temp Sensor
  7. TDC Sensor

#### **Engine Specification**

- |                        |   |                                 |
|------------------------|---|---------------------------------|
| 1. Type                | : | 4 Stroke cycle, Water Cooled    |
| 2. Timing              | : | Overhead Camshaft               |
| 3. Fuel System         | : | M.P.F.I System                  |
| 4. No. of Cylinder     | : | 4 Cylinders                     |
| 5. No. of Valve        | : | 6 to 18 Valves                  |
| 6. Piston Displacement | : | 1100 to 1600 CC                 |
| 7. Maximum Output      | : | 30 to 60 KW at 4000 to 6000 RPM |
| 8. Maximum Torque      | : | 8 to 12 Kgm at 2500 to 4500 RPM |
| 9. Fuel Tank Capacity: | : | 10 lit to 20 lit                |
| 10. Make               | : | Maruti /Fiat                    |
- Manual Should be provided .
  - With Suitable stand.

#### **20.ENGINE 4 CYLINDER DIESEL ENGINE OTHER THAN PROCURED UNER MODULE 101 AND 02**

**(CRDE Fuel System OR EQUANT)**

- Complete Diesel Engine with CRDE assembly & all required accessories like starting system, Fuel feed system, Cooling System, Charging System, Lubrication System.
- Battery, Starter Motor, Alternator, Fuel injection pump, injector, fuel tank, fuel filter, radiator, cooling fan, oil filter, oil pump etc. with working condition.
- Engine SHOULD be mounted on M.s sturdy frame having four caster wheels for easy shifting and a panel board fitted on a frame having in cluster unit fitted in a panel board.
- Acrylic Sheet should be provided at the back side of the panel board for easy view of wiring.
- Engine SHOULD be start from panel board by ignition switch.
- With Suitable stand.
- Manual should be provided.

### **Engine Specification**

1. Type	:	4 Stroke cycle, Water Cooled diesel engine
2. Engine Valve Lay Out	:	4 Cylinder in line with two valve per cylinder
3. Arrangement of Cylinder	:	In line
4. Piston Displacement	:	2000 CC to 2800 CC
5. Maximum Output (Bhp)	:	100 to 120 Bhp at 3000 to 6000 RPM
6. Torque	:	15 to 30 Kgm at 1500 to 3000 RPM
7. Fuel Tank Capacity	:	10 lit to 20 lit
Make	:	Mahindra/ Tata

## **21.FUEL INJECTION PUMP TEST BENCH WITH ACCESSORIES**

Fuel injection pump calibration equipment and its accessories and special tools with attachment for distributor pump and inline pump.

- 4 to 8 Cylinder pump can be checked in this Machine.
- Higher RPM required for checking Rotary pumps can attain.
- Length 1800 mm x 970 mmx1830 mm (Wooden case)
- Gross Weight 700 to 750Kgs Approximately.
- Electric Motor 5 HP, 3 Phase, 415 V, 50 cycles, 2800 RPM
- Transmission Hydraulic type variable transmission speed can be controlled up to the required RPM Continuously & Rotation in both directions with the help of single control.

- Machine Lamp the High Quantity industrial lamp can be adjusted at any angle with their universal arms and A Lamp Should be provided inside the swiveling injector console.
- Fuel Tank 40 to 50 Liters capacity of fuel with additional small return tank of dirty oil capacity 3 liters.
- Intermediate gearbox speed range 0-1000 & 0-3500 RPM with maximum torque.
- Pressure gauge for test oil 0 to 35 Kg/cm & 0 to 21 Kg/cm for transfer Pressure.
- Electronic Stroke counters 0 to 9999 RPM, stroke in multiples of 100 up to 1200.
- The Swiveling injector console can be set in both directions for LHS & RHS pump.
- Electronic Temperature controller
- Measuring Glasses 8 nos. with capacity of 16cc
- Measuring Glasses 8 nos. with capacity of 60 cc
- 12/24 Volts DC supply socket provided for checking solenoid switch of Rotary pump.
- The Machine is supplied with original manual an original manufacture's certification to inspecting authority at inspection.
- The bench should have be designed for testing of Lucas type Rotary pump CAV, DPA, MICO Bosch, VA VE Peugeot type rotary pumps as well as all kinds of inline (Camshaft) pumps up to 8 cylinders.
- Training to the instructional staff must be provided.
- Installation of the Test bench to be done by supplier.

Attachment & Accessories:

1. Mounting Brackets & Quick action clamp assembly for inline (camshaft) pumps -1 set.
2. Fixture plate for mounting rotary distributor type pumps fitted with flanged type brackets - 1 No.
3. 75 ml and 0-16 ml precisely graduated glass test tubes.
4. High pressure pipes with M 12x 1.5 & M 14x 1.5 8 Nos. Each.
5. One phasing bar.
6. Set of perforated trays for keeping tools.

Note: Operating manual is required as per quantity.

## **22. GEAR BOX WITH DIFFERENTIAL (TRANSAXLE)**

- Motorized cut sectioned of Gearbox, Propeller shaft Differential mounted on stand with working.
- The cutting should be enabling the working parts visible i.e. the Gears & Synchronized unit. Main shaft, Lay shaft, Reverse Gears, Selector Mechanism. Crown Wheel & Pinion and Rear Axle shaft etc.
- Suitable Electric motor drives with Reduction gear to be provided understand working of gear & Differential mounted on stand.
- Internal components such as all gears & differential parts should be chrome plated.
- Some parts of Gearbox with differential should be coated with attractive colors for better understanding.
- Whole unit should be mounted on MS Frame.
- The Gearbox & Differential should be cut in such a way to demonstrate below stated parts movable & stationary parts.
  1. Gears
  2. Synchronized unit
  3. Main Shaft
  4. Input Shaft
  5. Lay Shaft Gear
  6. Reverse Gear
  7. Selector Mechanism
  8. Crown wheel +Star & Sun gear
  9. Pinion
  10. Rear Axle & casing
  11. Rear drum
  12. Propeller shaft
  13. Suitable Electric motor with Reduction Gear box (with V- belt, Pulley)
- Equipment should be provided on Suitable stand.
- Manual should be provided.

**23. HYDRAULIC BRAKE ASSEMBLY (BRAKE PEDAL, BOOSTER, TANDEM MASTER CYLINDER, WHEEL CYLINDER, BRAKE DRUM-MOCK UP ASSEMBLY)**

**Technical Specification**

- Brake Assembly should be mounted on sturdy stand.
- Front and Rear drum should be each one side cut to see the breaking system in working condition.
- All the parts of air brake assembly should be coated with attractive color for batter understanding.
- The assembly should be consisting of bellow, stated parts to make it working on sturdy stand.
  1. Tandem master cylinder ( Front & Rear Brake is working independently)
  2. Brake drum assembly
  3. Brake pedal
  4. Brake pipe line
  5. Brake oil container (Reservoir)
  6. Rear axle with casing
  7. Vacuum Brake booster
  8. Stop light (12 Volt/2 Amp ) working should be transformer(12 V/2 Amp)
  9. 0.5 Hp, 1440 Rpm Electric motor driven by alternator with vacuum pump.
  10. 0.5 Hp, 1440 Rpm Electric motor with (1:40 Ratio) Reduction Gear box ( V belt with pulley)
    - Front and Rear drum should be cut to each one side show the parts in working condition.
    - Whole assembly should be mounted on suitable stand.
- Manual should be provided

#### **24. PETROL ENGINE 4 STROKES FITTED WITH MPFI/ CARBURETOR FUEL SYSTEM FOR PRACTICE, UP TO 50 HP WITH MANUALS**

##### **(Carburetor Fuel System)**

- Petrol Engine having cubic capacity of 850 to 1300 cc developing about 30 to 50 BHP at 4500/6500 RPM.
- Carburetor System with all necessary accessories like radiator with safe guard fuel tank, alternator, battery, starter motor, cooling fan etc.
- Engine is mounted on M.s sturdy frame having four caster wheels for easy shifting and a panel board fitted on a frame having in cluster unit.
- Engine should be start from panel board by ignition switch and it should be in a working condition with speed controlled from panel board.

### **Engine Specification**

1. Type : 4 Stroke cycle, Water Cooled
2. Fuel System : Carburetor System
3. No. of Cylinder : 4 Cylinders
4. Piston Displacement : 850 to 1300 CC
5. Maximum Output : 30 to 50 BHP at 4500 to 6500 RPM
6. Fuel Tank Capacity : 10 lit to 20 lit
7. Make : Maruti/Fiat

Manual should be provided.

(MPFI Fuel System)

- MPFI Four cylinder petrol engine having cubic capacity of 1000 to 1500 cc developing about 60 to 90 KW at 4500/6500 RPM water cooled.
- Multipoint fuel injection system complete with all required accessories like radiator with safe guard, fuel tank, alternator, battery, starter motor, cooling fan etc.
- Engine is mounted on M.s sturdy frame having four caster wheels for easy shifting and a panel board fitted on a frame having in cluster unit.
- Engine must start from panel board by ignition switch and it should be in a working condition with speed controlled from panel board of Knob.
- Engine is with all necessary sensors like
  1. ECU
  2. Absolute Pressure sensor,
  3. Throttle Position Sensor
  4. Intake Air Temperature Sensor
  5. Lambda Sensor
  6. TDC Sensor
  7. Engine Idling Actuator
  8. Engine Coolant temperature Sensor etc.

### **Engine Specification**

1. Type : 4 Stroke cycle, Water Cooled
2. Timing : Twin Overhead Camshaft

3. Fuel System : M.P.F.I System
4. No. of Cylinder : 4 Cylinders
5. No. of Valve : 16 Valves
6. Piston Displacement : 1000 to 1500 CC
7. Maximum Output : : 40 to 75 KW at 4500 to 6500 RPM
8. Maximum Torque : 10 to 20Kgm at 3000 to 5000 RPM
9. Fuel Tank Capacity : 10 lit to 20 lit
10. Make : Maruti/Fiat
- Manual should be provided.

## **25. PETROL ENGINE LATEST MODEL (CNG ENGINE) WITH WORKSHOP MANUALS**

- MPFI Four cylinder petrol engine having cubic capacity of 1100 to 1600 cc developing about 30 to 60 KW at 4000/6000 RPM water cooled.
- Multipoint fuel injection system complete with all required accessories like radiator with safe guard, fuel tank, alternator, battery, starter motor, cooling fan etc.
- Engine is mounted on M.s sturdy frame having four wheels for easy shifting and a panel board fitted on a frame having in cluster unit.
- Engine SHOULD start from panel board by ignition switch and it should be in a working condition with speed controlled from panel board.
- Complete C.N.G kit with fitted on engine.
- Engine running SHOULD be petrol & CNG system operated by selector switch.
- Engine is with all necessary sensors like
  1. ECU
  2. Absolute Pressure sensor,
  3. Throttle Position Sensor
  4. Intake Air Temperature Sensor
  5. Lambda Sensor
  6. Coolant temp. Sensor
  7. TDC Sensor

### **Engine Specification**

1. Type : 4 Stroke cycle, Water Cooled

- |                        |   |                                 |
|------------------------|---|---------------------------------|
| 2. Timing              | : | Overhead Camshaft               |
| 3. Fuel System         | : | M.P.F.I System                  |
| 4. No. of Cylinder     | : | 4 Cylinders                     |
| 5. No. of Valve        | : | 6 to 18 Valves                  |
| 6. Piston Displacement | : | 1100 to 1600 CC                 |
| 7. Maximum Output      | : | 30 to 60 KW at 4000 to 6000 RPM |
| 8. Maximum Torque      | : | 8 to 12Kgm at 2500 to 4500 RPM  |
| 9. Fuel Tank Capacity  | : | 10 lit to 20 lit                |
| 10. Make               | : | Maruti/Fiat                     |
- Manual should be provided.

## **26. PETROL ENGINES OF CARS LATEST MODELS WITH MANUALS**

- MPFI Four cylinder petrol engine having cubic capacity of 1500 to 2000 cc developing about 60 to 90 KW at 4500/6500 RPM water cooled.
- Multipoint fuel injection system complete with all required accessories like radiator with safe guard, fuel tank, alternator, battery, starter motor, cooling fan etc.
- Engine is mounted on M.s sturdy frame having four caster wheels for easy shifting and a panel board fitted on a frame having in cluster unit.
- Engine must start from panel board by ignition switch and it must be in a working condition with speed controlled from panel board of Knob.
- Engine is with all necessary sensors like
  1. ECU
  2. Absolute Pressure sensor,
  3. Throttle Position Sensor
  4. Intake Air Temperature Sensor and Pressure Sensor
  5. Lambda Sensor
  6. TDC Sensor
  7. Engine Idling Actuator
  8. Engine Coolant temp Sensor etc.

### **Engine Specification**

- |           |   |                              |
|-----------|---|------------------------------|
| 1. Type   | : | 4 Stroke cycle, Water Cooled |
| 2. Timing | : | Twin Overhead Camshaft       |

3. Fuel System	:	M.P.F.I System
4. No. of Cylinder	:	4 Cylinders
5. No. of Valve	:	16 Valves
6. Piston Displacement	:	1500 to 2000 CC
7. Maximum Output	:	60 to 90 KW at 4500 to 6500 RPM
8. Maximum Torque	:	10 to 20 Kgm at 3000 to 5000 RPM
9. Fuel Tank Capacity:	:	10 lit to 20 lit
10. Make	:	Maruti/Fiat

Manual Should be provided .

## **27. REAR AXLE ASSEMBLY COMPLETE WITH DRIVE SHAFTS AND BRAKE DRUMS (FULL FLOATING, SEMI –FLOATING TYPE)**

### **Technical Specification: (SEMI –FLOATING AXLE)**

- The Assembly should be mounted on suitable stand.
- Axle assembly should be coated with attractive color for better understanding.
- Internal components such as crown wheel, sun & star gears, pinion should be chrome plated.
- Drum& Axle casing should be cut out to show the internal components in working parts.
- Final drive driven by hand operated.
- Rear Axle assembly should be provided with below stationary & moving parts in cut section to make it working model.

1. Rear Axle casing
2. Crown Wheel
3. Pinion Assembly
4. Axle Shaft semi floating type
5. Brake drum assembly
6. Sun & Star gear

### **Technical Specification: (FULL FLOATING AXLE)**

- The Assembly should be mounted on suitable stand.
- Axle assembly should be coated with attractive color for better understanding.
- Internal components such as crown wheel, sun & star gears, and pinion should be chrome plated.
- Drum& Axle casing should be cut out to show the internal components in working parts.
- Final drive driven by hand operated.

- Rear Axle assembly should be provided with below stationary & moving parts in cut section to make it working model.

1. Rear Axle casing
2. Crown Wheel
3. Pinion Assembly
4. Axle Shaft full floating type
5. Brake drum assembly  
Sun & Star gear

## **28. SYNCHROMESH GEAR BOX OF LCV**

- A Motorized Synchronesh gear box should be cut to visualize the gears and their movement and input shaft, lay shaft Etc.
- The motor should provide to driving shaft and working of gear box can be shown.
- For power transmission “V” belt and pulley should be used.
- Internal components such as all gears should be chrome plated.
- Some parts of Gearbox should be coated with attractive color for better understanding.
- Manual should be provided.
- Whole unit should be mounted on suitable stand.

## **29. SPARK PLUG CLEANER AND TESTER**

Spark Plug Cleaning & Testing Machine Fully enclosed fiber glass ( FRP) Body. Separate plug cleaning chamber consisting of a sand blasting system connected to double acting valve for blasting & subsequent cleaning to remove the abrasive & dust.

- Working Pressure : 5-12 Kgf/cm<sup>2</sup>
- Plug sizes : M 10, M 14, M 18
- Ignition Coil : 12/12 V./KV.
- Electronic Vibrator : 220V./12V.
- Input Voltage : 220 Volt, 50 Hz.

Accessories -The blasting sand (abrasive) 500 gm & all essential accessories Supplied with equipment

## **SPARK PLUG TESTING MACHINE**

### **Technical Specification:**

Spark Plug Cleaning & Testing Machine Fully enclosed fiber glass (FRP) Body. Separate plug cleaning chamber consisting of a sand blasting system connected to double acting valve for blasting & subsequent cleaning to remove the abrasive & dust.

- Working Pressure : 5-12 Kgf/cm<sup>2</sup>
- Plug sizes : M 10, M 14, M 18
- Ignition Coil : 12/12 V./KV.
- Electronic Vibrator : 220V. /12V.
- Input Voltage : 220 Volt, 50 Hz.

Accessories -The blasting sand (abrasive) 500 gm & all essential accessories Supplied with equipment.

## **30. TYRE REMOVER PNEUMATIC & MECHANICAL TYPE**

### **( A) Tyre Remover Pnematic Type**

Rim clamp Dia 10-20" Outer, 12-20" inner.

Wheel Dia 29"max.

Rim width 3-12"

Tyre width 16" max.

Bead breaking range 2.75-13"

Bead Breaking Force 2150 Kgs

Compressor air supplier 8-10 Bar

Operating Pressure (Pneumatic) 6-8 Bar

Motor 1 HP /1440 RPM

### **( B) Tyre Remover Mechanical Type**

Rim clamp Dia 10-18" Outer, 12-20" inner.

Wheel Dia 29"max.

Rim width 12"

Tyre width 13" max.

Tyre diameter max. 39" (990 mm)

Bead Breaking Force 1500 Kgs

Power Supply 230 VAC, 1 Phase

With all necessary accessories & Operating Manual

## **31. TYRE RETREADING MACHINE WITH ACCESSORY**

Designed for servicing and repairing medium/ heavy duty truck tires. adjustable spreading for improved access and safety. Integrated lifting device with a lifting height of 17.50 inches. A ramp that automatically retracts as the tire is lifted and durable ball bearing rollers.

Specification:

- Tyre Width : 145-875 mm
- Air Supply : 6-10 Bar
- Power Supply : 220 V/380 V,50/60 HZ
- Net Weight : 82 Kgs

### **32. TYRE VULCANIZING MACHINE**

- Voltage : 220 V
- Power supply : 5a
- Max current : 500w\* 2
- Pesis tange insulation :  $\geq 5$  herti

For truck tire shoulder, tread, sidewall repairing.  
Reduced heat up time from 15 minutes to less than 5 minutes.  
Individual contour plates and accessories are included.

### **33. VACUUM ASSISTED HYDRAULIC BRAKE ASSEMBLY**

**Technical Specification :**

- Vacuum Assisted Hydraulic Brake Assembly should be mounted on suitable vertical stand.
- Only one front drum should be cut -out show the working parts.
- Front drum run by hand operated.
- Rear Brake assembly in brake plate, brake shoe with liner to show working of brake.
  - Some parts of brake assembly should be coated with attractive color for better understanding.
- An Electric Motor driven Alternator and vacuum pump to operated brake system with suitable control.
- The Magnetic Valve & Stop light working by transformer.
- The assembly should be consisting of bellow, stated parts to make it working on vertical stand.
  1. Tandem master cylinder.
  2. Booster.
  3. Brake oil container (Reservoir)
  4. Non Return valve.
  5. Vacuum tank
  6. Alternator with Vacuum pump.
  7. Brake pedal
  8. Brake Drum Assembly ( one Front)
  9. Brake pipe line

10. Electric motor (suitable)

Manual should be provided.

### **34. WHEEL ALIGNMENT GAUGE**

Wheel Alignment Gauge Tester complete with following Accessories:

1. Toe in Toe out gauge.
2. Packed in wooden case.
3. Caster Camber King pin inclination gauge pair of Turning Table.
4. Lamp with clamp operated with 12 Volt battery.
5. Service Manual

### **35. WHEEL BALANCING MACHINE WITH ACCESSORY**

- Dual display for inner and outer side of the wheels
- Auto start/ Auto stop functions
- Electronic calibration ( No requirement of calibration )
- Suitable for static and dynamic balancing
- Pedal brake for weight position
- High accuracy main shaft ensure a High precision balancing.
- it is suitable for various kinds of wheel structure
- Three location modes for choice
- With malfunction diagnosis and self - calibration function
- Ounce /Gram, Millimeter/inch selectable for easy conversion.
- suitable for Cars & LCVs

#### **Technical Data**

- Power supply : 220V/60 Hz/1 Phase
- Power : 0.25 Kw
- Rim Width : 1.5/10"
- Rim diameter : 12/18
- Max wheel diameter : 650 mm
- Balancing time : 7 Second
- Balancing Speed : 180 rpm
- Balancing Precision :  $\pm 1$  gm
- Net/Gross Weight : 118/146 Kg.
- Packing dimension : 870 x 700 x 1120 mm



## **1.0 INTENT OF SPECIFICATION**

These specifications are intended to cover manufacturing, testing, supply, installation, commissioning of the equipment under the package indicated in clause 2.1 below and other incidental services.

## **2.0 SCOPE OF WORK:**

### **2.1 Supply**

The scope of supply of the equipment package shall include installation and commissioning of each of the items mentioned under the above package at each of the consignees' site. The scope also includes demonstration and customer training at each of the consignee sites.

2.2 The scope of work shall be deemed to include all activities which may not have been explicitly mentioned but are reasonably implied for the successful completion of the work for which these specifications are intended.

2.3 The detail technical specification for each package are given in the Annexure enclosed with this document

## **3.0 GENERAL REQUIREMENTS**

All the Mechanical, Electrical and other measuring/Testing equipment operating in non-air conditioning environment should be suitable for working in 50° C ambient temperature and 90% relative humidity.

3.1 Bidder shall indicate site preparation details such as room dimensions, operating temperature relative humidity type and number of power sockets and any other requirements for the equipment offered. (Electronic, Electrical, Mechanical equipment)

3.2 All the equipments shall be suitably protected, coated, covered or boxed and crated to prevent damage or deterioration during transit, handling and storage at site till the time of commissioning. While packing all the materials, the limitations from the point of view of availability of railway wagon sizes, in India should be taken into account. The contractor shall be responsible for any loss or damage during transportation, handling and storage due to improper packing.

## **4.0 EXCLUSIONS**

Following are excluded from bidders' scope:

Civil Works, Air conditioning (if required) and Electric power supply



**SECTION VI-A**  
**QUALIFICATION CRITERIA**  
 (Referred to in Clause 13.3(b) of ITB)

- The Manufacturer should be in the business of manufacturing of similar equipment for a period not less than 5 Years.
  
- The bidder or the manufacturer on whose behalf the authorized agent is bidding must have manufactured, tested and supplied the following minimum number of machines during the last five years (2005-2006 to 2009-2010)

Sr. No.	Min. number of machines manufactured, tested and supplied in each of the last 5 years
1.	2 Nos.
2.	2 Nos.
3.	2 Nos.
4.	4 Nos.
5.	4 Nos.
6.	4 Nos.
7.	2 Nos
8.	2 Nos
9.	2 Nos
10.	4 Nos
11.	8 Nos
12.	8 Nos
13.	2 Nos
14.	4 Nos
15.	8 Nos
16.	4 each
17.	4 Nos
18.	2 Nos
19.	1 No.
20.	1 No.
21.	1 No.
22.	2 Nos
23.	2 Nos
24.	4 Nos
25.	2 Nos
26.	4 Nos
27.	2 Nos
28.	8 Nos
29.	4 Nos
30.	2 set
31.	1 No
32.	2 Nos
33.	2 Nos
34.	2 Nos
35.	3 set

The Manufacturer / Bidder should furnish the information on past supplies and satisfactory performance in the Performa given under Section XI. The satisfactory operation must be for at least 1 month on the date of bid opening.

- The Bidder should furnish data to support that he has the financial capacity to perform the contract, for this the bidder should have the min turnover as indicated below in any of the last five years (2005-2006 to 2009-2010)

<b>Sr .No.</b>	<b>Minimum Turnover (Indian Rs.)</b>
1.	1 Lakh
2.	14 Lakhs
3.	18 Lakhs
4.	1.5 Lakhs
5.	7 Lakhs
6.	4 Lakhs
7.	1 Lakh
8.	1 Lakh
9.	1 Lakh
10.	1.5 Lakhs
11.	10 Lakhs
12.	13 Lakhs
13.	2 Lakhs
14.	28 Lakhs
15.	4 Lakhs
16.	10 Lakhs
17.	16 Lakhs
18.	20 Lakh
19.	3 Lakhs
20.	5 Lakhs
21.	6 Lakhs
22.	3 Lakhs
23.	2 Lakhs
24.	3.5 Lakhs
25.	2.5 Lakhs
26.	6.5 Lakhs
27.	2 Lakhs
28.	11 Lakhs
29.	1.5 Lakhs
30.	1.5 Lakhs
31.	3 Lakhs
32.	4 Lakhs
33.	2.5 Lakhs
34.	1.5 Lakhs
35.	24 Lakhs

- The bidders quoting as authorized representatives/ agent of manufacturers meeting with the above

requirements in full can be considered only if the bidder as authorized. Representative has supplied, installed and commissioned satisfactorily at least half of the equipment being procured in any one of the last five years (2005-2006 to 2009-2010)

**Notwithstanding any thing stated above, the purchaser reserves the right to asses the bidder's capacity and capability to perform the contract should circumstances warrant such an assessment in the overall interest of the purchaser deciding on award.**

## **SECTION VII: BID FORM AND PRICE SCHEDULE**

**SECTION VII: BID FORM**

To

Date.....  
 Credit No.....  
 IFB No.....

**State Project Director  
 (VTIP) cum Director of  
 Technical Education & Industrial  
 Training, Punjab, Takniki Sikhia  
 Bhawan, (I.T.Wing), Room No 304, 3<sup>rd</sup>  
 Floor, Plot No 1-A, Sector-36  
 A, Chandigarh-160036**

Gentlemen and/or Ladies:

Having examined the Bidding Documents including Addenda Nos..... *[Insert numbers]*, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver.....  
*(Description of Goods and Services)* in conformity with the said bidding documents for the sum of.....  
*(Total bid amount in words and figures)* or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this bid.

We undertake, if our bid is accepted, to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements.

If our bid is accepted, we will obtain the guarantee of a bank in a sum equivalent to ..... percent of the Contract Price for the due performance of the Contract, in the form prescribed by the Purchaser.

We agree to abide by this bid for the Bid validity period specified in Clause 16.1 of the Bid Data Sheet and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Commissions or gratuities, if any, paid or to be paid by us to agents relating to this Bid, and to contract execution if we are awarded the contract, are listed below:

Amount	Rupees	
Name and Address of agent		Purpose of Commission or gratuity

(if none, state "none").

Until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and your notification of award shall constitute a binding Contract between us.

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988".

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

We understand that you are not bound to accept the lowest or any bid you may receive.

We clarify/confirm that we comply with the eligibility requirements as per ITB Clause 2 of the bidding documents.

Dated this ..... day of ..... 200.....

\_\_\_\_\_  
 (Signature)

\_\_\_\_\_  
 (in the capacity of)

Duly authorized to sign Bid for and on behalf of \_\_\_\_\_

**PRICE SCHEDULE**

**PRICE SCHEDULE**

1	2	3	4	5					6	7	8
<u>Schedule No.</u>	<u>Item Description</u>	<u>Country of origin</u>	<u>Quantity &amp; Unit</u>	<b>Price for each unit</b>					<b><u>Unit price</u></b>	<u>Total price</u>	<u>Sales and other taxes payable if contract is awarded</u>
				Ex-factory/ Ex-warehouse/ Ex-showroom/ Off-the-shelf	Excise duty, if any	Packing & forwarding	Inland transportation, insurance and other local costs incidental to delivery	Incidental services as listed in Clause 8 of SCC			
				a	b	c	d	e	a+b+c+d+e	4 X 6	

**SECTION VIII: BID SECURITY FORM**

**SECTION VIII: BID SECURITY FORM**

Whereas .....<sup>1</sup> (*hereinafter called "the Bidder"*) has submitted its bid dated ..... (*date of submission of bid*) for the supply of ..... (*name and/or description of the goods*) (*hereinafter called "the Bid"*).

KNOW ALL PEOPLE by these presents that WE ..... (*name of bank*) of ..... (*name of country*), having our registered office at ..... (*address of bank*) (*hereinafter called "the Bank"*), are bound unto ..... (*name of Purchaser*) (*hereinafter called "the Purchaser"*) in the sum of \_\_\_\_\_ for which payment well 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 its Bid during the period of bid validity specified by the Bidder on the Bid Form; or
  - (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 its bid by the Purchaser during the period of bid validity:
  - (a) fails or refuses to execute the Contract Form if required; or
  - (b) fails or refuses to furnish the performance security, in accordance with the Instruction to Bidders;

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.

.....  
(Signature of the Bank)

**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.**

<sup>1</sup> \_\_\_\_\_  
*Name of Bidder*

**SECTION IX: CONTRACT FORM**

**SECTION IX: CONTRACT FORM**

**THIS AGREEMENT** made the .....day 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. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
  - (a) the Bid Form and the Price Schedule submitted by the Bidder;
  - (b) the Schedule of Requirements;
  - (c) the Technical Specifications;
  - (d) the General Conditions of Contract;
  - (e) the Special Conditions of Contract; and
  - (f) the Purchaser's Notification of Award.
3. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the goods and services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

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:.....

**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.**

**SECTION X: PERFORMANCE SECURITY FORM**

**SECTION X. PERFORMANCE SECURITY FORM**

To

State Project Director  
 (VTIP) cum Director of  
 Technical Education & Industrial  
 Training, Punjab, Takniki Sikhia  
 Bhawan, (I.T.Wing), Room No 304, 3<sup>rd</sup>  
 Floor, Plot No 1-A, Sector-36  
 A, Chandigarh-160036

**WHEREAS** ..... (Name of Supplier)  
 hereinafter called "the Supplier" has undertaken, in pursuance of Contract (Notification of Award) No.....  
 dated,..... 20... to supply.....(Description of Goods and Services)  
 hereinafter called "the Contract".

**AND WHEREAS** it has been stipulated by you in the said Contract that the Supplier shall furnish you with a Bank  
 Guarantee by a recognized bank 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 a Guarantee:  
**THEREFORE WE** hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a  
 total of ..... (Amount of the Guarantee in Words and Figures) 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 limit of ..... (Amount of Guarantee) as  
 aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified  
 therein.

This guarantee is valid until the .....day of.....20.....

Signature and Seal of Guarantors

.....  
 .....

Date.....20....

Address:.....

.....  
 .....

**Note: The Bank Guarantee [submitted by Indian Supplier] should be executed on stamp  
 paper in accordance with stamp paper act. The stamp paper should be in the name of  
 executing bank.**

**SECTION XI: PERFORMANCE STATEMENT**

**SECTION XI**

( Please see clause 13.3 (b) (ii) of Instructions of Bidders)

Proforma for Performance Statement (for a period of last three/five years)

Bid No..... Date of Opening.....Time.....Hour.....

Name of the Firm.....

Order Placed by (full address of Purchaser	Order No. and date	Description and quantity of ordered equipment	Value of order	Date of Completion of delivery		Remarks indicating reasons for late delivery ,if any	Has the equipment been satisfactorily functioning? ( Attach a certificate from the purchaser/ consignee
				As per contract	Actual		

**SECTION XII**

(Please see Clause 13.3(a) of Instructions to Bidders)

**MANUFACTURERS' AUTHORIZATION FORM\***

No. \_\_\_\_\_ dated

**To**

**State Project Director  
(VTIP) cum Director of  
Technical Education & Industrial  
Training, Punjab, Takniki Sikhia  
Bhawan, (I.T.Wing), Room No 304, 3<sup>rd</sup>  
Floor, Plot No 1-A, Sector-36 A,  
Chandigarh-160036**

Dear Sir:

IFB No.

We \_\_\_\_\_ who are established and reputable manufacturers of \_\_\_\_\_ (*name and description of goods offered*) having factories at \_\_\_\_\_ (*address of factory*) do hereby authorize M/s \_\_\_\_\_ (*Name and address of Agent*) to submit a bid, and sign the contract with you for the goods manufactured by us against the above IFB.

No company or firm or individual other than M/s \_\_\_\_\_ are authorized to bid, and conclude the contract for the above goods manufactured by us, against this specific IFB. (*This para should be deleted in simple items where manufacturers sell the product through different stockists.*)

We hereby extend our full guarantee and warranty as per Clause 15 of the General Conditions of Contract and Clause 10 of the Special Conditions of Contract for the goods and services offered for supply by the above firm against this IFB.

Yours faithfully,

(Name)

(Name 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 legally bind the manufacturer. It should be included by the Bidder in its bid.

\* Modify this format suitably in case where manufacturer's warranty and guarantee are not applicable for the items for which bids are invited.

## SECTION XIV

### Eligible Countries

**As of May 2004**

1. In accordance with Para 1.8 of the Guidelines: Procurement under IBRD Loans and IDA Credits, dated May 2004, the Bank permits firms and individuals from all countries to offer goods, works and services for Bank-finance projects. As an exception, firms of a Country or goods manufactured in a Country may be excluded .

Para 18(a)(i) as a matter of law or official regulation, the Borrower's Country prohibits commercial relations with that Country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of Goods or Works required, or

Indicate the names herein of the countries if any

Para 18(a)(ii) by an Act of Compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's Country prohibits any import of goods from that Country or any payments to persons or entities in that country.

Indicate the names of the countries if any

2. For the information of borrowers and bidders, at the present time firms, goods and services from the following countries are excluded from this bidding.

**Notes:**

1. Any questions regarding this list should be addressed to the Director, Procurement Policy and Services Group, Operational Core services Network, The World Bank

**ANNEXURE XV****PROFORMA FOR EQUIPMENT AND QUALITY CONTROL EMPLOYED BY THE MANUFACTURER**

BID NO. .... DATE OF OPENING : .....

NAME OF THE BIDDER : .....

(Note : All details should relate to the manufacturer for the items offered for supply)

1. Name & full address of the Manufacturer
2.
 

(a)	Telephone & Fax No	Office/Factory/Works
(b)	Telex No.	Office/Factory/Works
(c)	Telegraphic address :	
3. Location of the manufacturing factory.
4. Details of Industrial License, wherever required as per statutory regulations.
5. Details of important Plant & Machinery functioning in each dept. (Monographs & description pamphlets be supplied if available).
6. Details of the process of manufacture in the factory.
7. Details & stocks of raw materials held.
8. Production capacity of item(s) quoted for, with the existing Plant & Machinery
  - 8.1 Normal
  - 8.2 Maximum
9. Details of arrangement for quality control of products such as laboratory, testing equipment etc.
10. Details of staff:
  - 10.1 Details of technical supervisory staff in charge of production & quality control.
  - 10.2 Skilled labour employed.
  - 10.3 Unskilled labour employed.
  - 10.4 Maximum No. of workers (skilled & unskilled) employed on any day during the 18 months preceding the date of Tender.
11. Whether Goods are tested to any standard specification? If so, copies of original test certificates should be submitted in triplicate.
12. Are you registered with the Directorate General of Supplies and Disposals, New Delhi 110 001, India? If so, furnish full particulars of registration, period of currency etc. with a copy of the certificate of registration.

.....  
Signature and seal of the Manufacturer