BID DOCUMENT

NATIONAL COMPETITIVE BIDDING

FOR

SUPPLY, INSTALLATION, COMMISSIONING & MAINTENANCE OF MANUFACTURING PRACTICES LABORATORY EQUIPMENT (MACHINE SHOP)
FOR
I.K.G.PUNJAB TECHNICAL UNIVERSITY, KAPURTHALA AND ITS OTHER CONSTITUENT CAMPUSES (PUNJAB)

Bid No. : **EdCIL/PROC/PTU-2017/LAB-BTECH-MAN/MAN-PKG1/1**

PART-II- FINANCIAL BID

EdCIL (India) Limited
(A Govt. of India Mini Ratna Enterprises)
'EdCIL House', Plot No. 18A, Sector- 16A
NOIDA – 201301 (UP), INDIA
Tel: 0120 – 2512001-006, FAX: 0120-2515372

Dated: 09.06.2017
This document serially numbered from page number 01 to 22.

FINANCIAL BID

Instructions to Bidders

1. Financial Bid shall be submitted with full price details.

Financial Bid shall contain only the prices duly filled in as per the format given in Schedule of Rates provided in the tender document. Price bid should not have any Commercial and/or Technical stipulation in addition to, what is already given in Part I – Technical bid.

Financial Bid Standard Forms (Form-1, Form-2A and /or Form-2B) shall be used for the preparation of the price quote according to the instructions provided.

2. **The Bidder should quote for all the Laboratory items / equipments listed in this document. In case, the Bidder/s does not quote for all the Laboratory items/Equipments, the Bid shall be treated as incomplete and shall be rejected summarily.**

3. The Items / equipments to be supplied / delivered / installed / commissioned at various locations of IKGPTU Campuses is as shown in the enclosed Annexure VI. The rate shall be inclusive of all taxes, octroi, transportation (as per the location), packing, loading and unloading (as designated location) ,Insurance etc. and nothing shall be paid extra.

4. The bid shall be evaluated on total value of all Laboratory items/Equipments as shown in summary and supply order shall be placed to a bidder as a composite bid.

5. The prices quoted by the bidder shall be fixed for the quantity mentioned for the duration of the contract and shall not be subject to adjustment on any account. Price should be firm for any positive or negative variation in quantities up to 100%.

6. The changes displayed in the corrigendum/addendum to the bid documents, particularly with the financial bid should be attached with the financial bid submission, in the same packet, duly signed and stamped by the authorized signatory of the Bidder firm.

FINANCIAL BID SUBMISSION FORM

To:

Chief General Manager (EIS & EPS)
EdCIL (India) Limited
EdCIL House, 18 A, Sector-16 A
NOIDA – 201301 (U.P.), India

Dated: ___/___/2017

Dear Sir,

We, the undersigned, offer to provide "SUPPLY, INSTALLATION , COMMISSIONING & MAINTENANCE OF MANUFACTURING PRACTICES LABORATORY EQUIPMENT(MACHINE SHOP)" in accordance with your Request for Proposal dated ___/___/2017.

Our attached Financial Bid is for the amount of _____ *[Indicate the corresponding to the amount(s), currency(ies) {Insert amount(s) in words and figures}].*

Please note that all amounts shall be the same as in Form-1. Our Financial Bid shall be binding upon by us subject to the modifications resulting from Contract negotiations, if any, up to expiration of the validity period of the Proposal.

We remain,

Yours sincerely,

Authorized Signature {In full and initials}:
Name and Title of Signatory:
In the capacity of:
Address:
E-mail:

FORM-1

SUMMARY OF FINANCIAL BID

S. No.	Description	Amount (exclusive of Tax) (Rs.)	Tax (Rs.)	Amount (Inclusive of Tax) (Rs.)
A.	MANUFACTURING PRACTICES LABORATORY EQUIPMENT (MACHINE SHOP) (Form-2A and/or Form-2B)			
B.	Comprehensive Annual Maintenance (Annexure-IV)			
	Total (Rs.)			

Total Price Bid (exclusive of taxes) (in Words)

(Rupees……)

Total Price of Bid (Inclusive of taxes) (In Words)

(Rupees……)

Signature of bidder	**……**
Name & Address	**……** **……**
Date	**……**

Note :	
i)	***Discount or any other offers affecting the package price must be mentioned here only. Discount or any other offers affecting the package price mentioned at any other place of the bid will not be considered.***
ii)	***In case of discrepancy between unit price and total price, the unit price shall prevail.***
iii)	***Bids shall be evaluated based on total price without taxes.***

FORM-2A

(FINANCIAL BID)

PRICE SCHEDULE FOR GOODS TO BE IMPORTED

ANNEXURE – I

Date: ……..

Name of the Department:

Name of the Laboratory:

(A) Price Schedule: (Format used for imported items)

S.No.	Currency	Description and Specification of the Item	Qty. in Units	Unit Price	Agency Commission (If applicable)	Discount	Ex-works price	Packing + Handling + DOC + Inland Freight +Insurance	CIF price	Insurance + Freight	CIP Price	Total Price
			(a)	**(b)**	**(c)**	**(d)**	**(e)=(b+c-d)**	**(f)**	**(g)= (e+f)**	**(h)**	**(i) = (g+h)**	**(j) = (i*a)**
				(i)In Figures: (ii)In words:								

Total Price of Bid (In Words) ……	
Signature of bidder	**……**
Name & Address	**……**
Date	**……**

Note:

1. ***The above financial template should be strictly followed. Any deviation from the above template (in terms of description and specification of the item) may debar the bidder at sole discretion of EdCIL.***
2. ***Discount or any other offers affecting the package price must be mentioned here only. Discount or any other offers affecting the package price mentioned at any other place of the bid will not be considered.***
3. ***In case of discrepancy between unit price and total price, the unit price shall prevail.***
4. ***Bids shall be evaluated based on total price including all charges as CIP Price.***
5. ***CIP - Carriage and Insurance Paid to (named place of destination)****: The seller pays for the carriage of the goods up to the named place of destination and the seller is required to obtain insurance for the goods while in transit.*

FORM-2B

ANNEXURE-II

PRICE SCHEDULED FOR GOODS (INDIGENOUS / IMPORTED GOODS TO BE QUOTED IN INR)

Price Schedule: (Format used for indigenous items/ Imported Items).

S.No.	Description and Specification of the Item	Qty. in Units	Unit Price in Rs.	Excise Duty % /Custom Duty	CST/ VAT %	Insurance other duties and taxes if any,	Packing and Inland Transportation	F.O.R Destination Price	Total Price in Rs. (Excluding Taxes)	Total Price in Rs. (Including Taxes)
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)=(b*a)	(i) = (g *a)
			(i)In Figures: (ii)In words:							
Total Price of Bid (In Words) …….										
								Signature of bidder	**…….**	
								Name & Address	**…….**	
								Date	**…….**	

Note:

1. ***The above financial template should be strictly followed. Any deviation from the above template (in terms of description and specification of the item) may debar the bidder at sole discretion of EdCIL.***
2. ***Discount or any other offers affecting the package price must be mentioned here only. Discount or any other offers affecting the package price mentioned at any other place of the bid will not be considered.***
3. ***In case of discrepancy between unit price and total price, the unit price shall prevail.***
4. ***Bids shall be evaluated based on total price including all charges as F.O.R Destination Price.***

ANNEXURE – III

COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT PRICES SCHEDULE

S. No.	Item Description	2nd Yr.	3rd Yr.	Total Comprehensive Annual Maintenance Contract for 2 years(2nd year & 3rd year) after warranty period of 1 year from the date of successful installation. (E= C+D)
A	B	C	D	E
1.	Equipment: Make: Model: Qty.: *(Mention Total quantity from Annexure-VI)*			
			SUB-TOTAL(Rs.) (Carry forwarded to Summary)	
Sub-Total Price Bid (exclusive of taxes) (in Words) (Rupees……)				
Sub-Total Price of Bid (Inclusive of taxes) (In Words) (Rupees……)				

Signature of bidder	**……**
Name & Address	**……** **……**
Note: **Date**	**……**

i)	***Discount or any other offers affecting the package price must be mentioned here only. Discount or any other offers affecting the package price mentioned at any other place of the bid will not be considered.***
ii)	***In case of discrepancy between unit price and total price, the unit price shall prevail.***
iii)	***Bids shall be evaluated based on total price without taxes.***

Note:

1. ***The above rates shall be included in computing the total cost of the equipments.***
2. ***Agency to use separate sheet for each equipment/Item/package.***

DETAILED TECHNICAL SPECIFICATIONS:

ANNEXURE-IV

A.	**MACHINE SHOP**	
S. No		**Description of Items**
1.	**Lathe Machine**	Height of Centres (mm): 177
		Swing over Bed (mm): 330
		Swing over Slide (mm): 200
		Between Centres (mm): 530
		Slide Movement (mm)210
		Bed
		Bed Type: 2 Flat & 2 V
		Bed Width (mm): 225
		Main Spindle
		Type & Size of Spindle Nose: A 2 Size 4
		Taper Bore in Spindle Sleeve: MT 4
		Spindle Bore (mm): 40
		Tail Stock
		Spindle Diameter (mm): 45
		Taper Bore in Spindle Sleeve: MT 4
		Speeds
		No. of Speeds: 8/ 16
		Range / RPM: 45-938 / 30-1250
		Electricals
		Main Motor and Power Supply: Motor (1440 R.P.M. / 440V/AC-3 Phase) 2 H.P.
		Additional features required:
		Hardened Slide ways.
		Safety clutch for feed overload
		Universal gear box to provide wide range of inch / mm threads & feeds.
		Accuracy tested as per IS: 1878 (part - 1) 1971.
		Standard Accessories to be included
		Self centring 3 Jaw Chuck

		Electric motor
		R/F switch (Radio frequency)
		'V' belts, 2 MT centres with centre bush
		Inch & mm gears
		Oil can
		Instruction and spare part manual
		Machine lamp
		Electro-coolant pump with tank & fittings
		Control panel with foot brake
		Service tool kit (spanner set, Allen key set, pliers, etc., required for upkeep of the machine)
		Face plate
		Taper turning attachment
		Quick change tool post with 5 tool holders (standard tool post)
2.	**Shaper Machine**	Machine size: 24",
		Length of Ram: 45",
		No. of speeds: 4,
		HP required (1440rpm): 2
3.	**Radial Drilling Machine**	Feed: Auto Feed
		Drilling capacity in steel: 32 mm
		Spindle traverse: 140 mm
		No. of auto feeds: 3
		No. of spindle speeds: 10
		Range of spindle speeds (rpm): 100 - 142 - 210 - 310 - 450 - 600 - 852 - 1260 - 1860 - 2700
		Power of the spindle drive motor: 1.5 kW/ 2HP, 1440 rpm, 415 AC, 3 Ph 50 Hz
		Table Working Surface: 330 mm Dia.
		Power of lifting motor: 0.75 kW, 1 HP, 2860 rpm, 415 AC, 3 Ph, 50 Hz
		No. of 'T' slots: 3
4.	**Universal Milling Machine**	Table Surface Size: 800 x 175 mm (32" x 7").
		Complete with 1 H.P. Electric Motor (Crompton Greaves or equivalent) with Starter & "V" Belts.
		Standard accessories:

		Long Milling Arbor ISO 40.
		Draw bolt with nut.
		Two arbour supports bearing brackets and one over arm brace.
		One set of service tools.
		One operation and spare instructional manual
		Universal Milling Head
		Coolant equipment with pump and motor.
		3 Axes DRO.
		Universal dividing head supporting block with suitable dividing plates.
		Height adjusted tail stock.
		Collet holder ISO 40.
		Conical type collets.
		ISO 40 End mill holders (three different dia.).
		Machine lamp for 220 volts.
5.	**Universal Milling Machine**	Table Surface Size: 1000 x 225 mm (40" x 9").
		Complete with 2 H.P. Electric Motor (Crompton Greaves or equivalent) with Starter & "V" Belts.
		Standard Accessories:
		Long Milling Arbor ISO 40.
		Draw bolt with nut.
		Two arbour supports bearing brackets and one over arm brace.
		One set of service tools.
		Operation Manual, Service Manual and instructional manual.
		Universal Milling Head.
		Coolant equipment with pump and motor.
		3 Axes DRO.
		Universal dividing head supporting block with suitable dividing plates.
		Height adjusted tail stock.
		Collet holder ISO 40.
		Conical type collets.
		ISO 40 End mill holders (three different dia.).
		Machine lamp for 220 volts.
6.	**Double Ended Bench Grinder**	Motor Capacity ½ H.P
		Wheel Size: 200 mm

		With Tool rest and two grinding wheels (one rough and one smooth) size 200 mm and with rotary switch.
		No load speed: 11000 rpm.
7.	**Double Ended Bench Grinder**	Motor Capacity 1 H.P
		Wheel Size: 250 mm
		With Tool rest and two grinding wheels (one rough and one smooth) size 250 mm and with rotary switch.
		No load speed: 11000 rpm.
		• Optimum performance
		• Durable finish
		• Compact design
8.	**Power Hacksaw**	Stroke: 5.75"
		Blade Size: 21 x 1.50"
		Capacity of Round Bar: 11"
		Capacity S.Q. Bar: 9"
		No. of speeds of stroke : 3
		No. of strokes per minute: 60-80-100
		Electric motor Required (1440 RPM): 1.5 H.P.
		Power of Coolant Motor: 0.09 KW
9.	**Bench Drilling Machine**	Drilling Capacity: 12 mm
		Spindle Travel: 75 mm
		Spindle Center To Column: 160 mm
		Spindle Nose To Table: 380 mm
		Spindle Nose To Base: 395 mm
		Column Diameter: 45 mm
		Morse Taper In Spindle: MT2
		Table (round) Size: 400 mm dia
		No. of Speeds: 4
		Spindle Speed With 1440 RPM Motor:
		Spindle Speed With 960 RPM Motor:
		Motor Required: 1 HP
	Standard Accessories per machine	Service tools set
		Drill chuck with key
		Reduction sleeves MT1 and MT2 with drift

		Foundation Bolts with levelling plates
		One V Belt extra
		Clamping T- bolts for table
		Two sets of drill bits.
10.	**Surface Grinder**	**Surface Grinder**
		With magnetic chuck,
		Table Size (mm): 200 X 500
		Max. Grinding Length (Longitudinal): 460 mm
		Max. Grinding Width (Crosswise): 220 mm
		Standard Magnetic Chuck Size (mm): 200 X 450
		Vertical Down Feed on Hand Wheel (mm): 0.02
		Hand wheel Per Graduation (auto feed) (mm): 0.02
		Grinding Spindle Drive Speed & Power 3 Phase: 2 H.P., 3400 rpm
		Grinding Wheel Size (mm): 200 X 19 X 31.75
		Drive Motor for X,Y, Z axes: 1 H.P.
		Coolant Pump motor: 1 H.P.
		Hydraulic tank capacity: 50 litres
		Standard Accessories :
		Cross Saddle Lock
		Built in wheel truing attachment
		Standard Magnetic Chuck
		Diamond holder & Diamond for magnetic chuck
		Dust Exhaust equipment
		Coolant Pump & fittings with tank
		Precision sine vice width of jaws 100mm
		Radius & Angular wheel forming attachment including diamond.
		Service tools set.
		One set of two grinding wheels with flange.
11.	**Planer machine**	Height of columns (Ft): 5
		Width between columns (mm): 1500
		Height under cross Rail (mm): 1500
		No of T- Slots : 5
		Width of T-Slots (mm) 20

		Distance between T- Slots (mm): 145
		Horizontal Traverse of tool holder (mm): 1150
		Vertical Traverse of tool holder (mm): 300
		Max. swivel of tool head Slide to either side (degree): +-50°
		Max. Size of tool Shank (mm): 45 x 45
		Swiveling of clapper box (mm): +-25
		Vertical Traverse of cross rail (elevating) (mm): 1500
		Elevating traverse of head (mm): 1300
		Method of driving planer: Belt driven
		Method of driving table: Rack & Pinion
		Motor 960 RPM 2 H.P.
		Standard Accessories:
		Service tools
		Two sets of cutting tools

ANNEXURE-V

TECHNICAL COMPLIANCE REPORT:

B.	**MACHINE SHOP**		Numerical values or other specification	Whether comply Yes/No
S. No		**Description of Items**		
1.	**Lathe Machine**	Height of Centres (mm): 177		
		Swing over Bed (mm): 330		
		Swing over Slide (mm): 200		
		Between Centres (mm): 530		
		Slide Movement (mm)210		
		Bed		
		Bed Type: 2 Flat & 2 V		
		Bed Width (mm): 225		
		Main Spindle		
		Type & Size of Spindle Nose: A 2 Size 4		
		Taper Bore in Spindle Sleeve: MT 4		
		Spindle Bore (mm): 40		
		Tail Stock		
		Spindle Diameter (mm): 45		
		Taper Bore in Spindle Sleeve: MT 4		
		Speeds		
		No. of Speeds: 8/ 16		
		Range / RPM: 45-938 / 30-1250		
		Electricals		
		Main Motor and Power Supply: Motor (1440 R.P.M. / 440V/AC-3 Phase) 2 H.P.		
		Additional features required:		
		Hardened Slide ways.		
		Safety clutch for feed overload		
		Universal gear box to provide wide range of inch / mm threads & feeds.		
		Accuracy tested as per IS: 1878 (part - 1) 1971.		

		Standard Accessories to be included		
		Self centring 3 Jaw Chuck		
		Electric motor		
		R/F switch (Radio frequency)		
		'V' belts, 2 MT centres with centre bush		
		Inch & mm gears		
		Oil can		
		Instruction and spare part manual		
		Machine lamp		
		Electro-coolant pump with tank & fittings		
		Control panel with foot brake		
		Service tool kit (spanner set, Allen key set, pliers, etc., required for upkeep of the machine)		
		Face plate		
		Taper turning attachment		
		Quick change tool post with 5 tool holders (standard tool post)		
2.	**Shaper Machine**	Machine size: 24",		
		Length of Ram: 45",		
		No. of speeds: 4,		
		HP required (1440rpm): 2		
3.	**Radial Drilling Machine**	Feed: Auto Feed		
		Drilling capacity in steel: 32 mm		
		Spindle traverse: 140 mm		
		No. of auto feeds: 3		
		No. of spindle speeds: 10		
		Range of spindle speeds (rpm): 100 - 142 - 210 - 310 - 450 - 600 - 852 - 1260 - 1860 - 2700		
		Power of the spindle drive motor: 1.5 kW/ 2HP, 1440 rpm, 415 AC, 3 Ph 50 Hz		
		Table Working Surface: 330 mm Dia.		
		Power of lifting motor: 0.75 kW, 1 HP, 2860 rpm, 415 AC, 3 Ph, 50 Hz		

		No. of 'T' slots: 3		
4.	**Universal Milling Machine**	Table Surface Size: 800 x 175 mm (32" x 7").		
		Complete with 1 H.P. Electric Motor (Crompton Greaves or equivalent) with Starter & "V" Belts.		
		Standard accessories:		
		Long Milling Arbor ISO 40.		
		Draw bolt with nut.		
		Two arbour supports bearing brackets and one over arm brace.		
		One set of service tools.		
		One operation and spare instructional manual		
		Universal Milling Head		
		Coolant equipment with pump and motor.		
		3 Axes DRO.		
		Universal dividing head supporting block with suitable dividing plates.		
		Height adjusted tail stock.		
		Collet holder ISO 40.		
		Conical type collets.		
		ISO 40 End mill holders (three different dia.).		
		Machine lamp for 220 volts.		
5.	**Universal Milling Machine**	Table Surface Size: 1000 x 225 mm (40" x 9").		
		Complete with 2 H.P. Electric Motor (Crompton Greaves or equivalent) with Starter & "V" Belts.		
		Standard Accessories:		
		Long Milling Arbor ISO 40.		
		Draw bolt with nut.		
		Two arbour supports bearing brackets and one over arm brace.		
		One set of service tools.		
		Operation Manual, Service Manual and		

		instructional manual.		
		Universal Milling Head.		
		Coolant equipment with pump and motor.		
		3 Axes DRO.		
		Universal dividing head supporting block with suitable dividing plates.		
		Height adjusted tail stock.		
		Collet holder ISO 40.		
		Conical type collets.		
		ISO 40 End mill holders (three different dia.).		
		Machine lamp for 220 volts.		
6.	**Double Ended Bench Grinder**	Motor Capacity ½ H.P		
		Wheel Size: 200 mm		
		With Tool rest and two grinding wheels (one rough and one smooth) size 200 mm and with rotary switch.		
		No load speed: 11000 rpm.		
7.	**Double Ended Bench Grinder**	Motor Capacity 1 H.P		
		Wheel Size: 250 mm		
		With Tool rest and two grinding wheels (one rough and one smooth) size 250 mm and with rotary switch.		
		No load speed: 11000 rpm.		
		• Optimum performance		
		• Durable finish		
		• Compact design		
8.	**Power Hacksaw**	Stroke: 5.75"		
		Blade Size: 21 x 1.50"		
		Capacity of Round Bar: 11"		
		Capacity S.Q. Bar: 9"		
		No. of speeds of stroke : 3		
		No. of strokes per minute: 60-80-100		
		Electric motor Required (1440 RPM): 1.5 H.P.		

		Power of Coolant Motor: 0.09 KW		
9.	**Bench Drilling Machine**	Drilling Capacity: 12 mm		
		Spindle Travel: 75 mm		
		Spindle Center To Column: 160 mm		
		Spindle Nose To Table: 380 mm		
		Spindle Nose To Base: 395 mm		
		Column Diameter: 45 mm		
		Morse Taper In Spindle: MT2		
		Table (round) Size: 400 mm dia		
		No. of Speeds: 4		
		Spindle Speed With 1440 RPM Motor:		
		Spindle Speed With 960 RPM Motor:		
		Motor Required: 1 HP		
	Standard Accessories per machine	Service tools set		
		Drill chuck with key		
		Reduction sleeves MT1 and MT2 with drift		
		Foundation Bolts with levelling plates		
		One V Belt extra		
		Clamping T- bolts for table		
		Two sets of drill bits.		
		With magnetic chuck,		
		Table Size (mm): 200 X 500		
		Max. Grinding Length (Longitudinal): 460 mm		
		Max. Grinding Width (Crosswise): 220 mm		
		Standard Magnetic Chuck Size (mm): 200 X 450		
		Vertical Down Feed on Hand Wheel (mm): 0.02		
		Hand wheel Per Graduation (auto feed) (mm): 0.02		
		Grinding Spindle Drive Speed & Power 3 Phase: 2 H.P., 3400 rpm		
		Grinding Wheel Size (mm): 200 X 19 X		

		31.75		
		Drive Motor for X,Y, Z axes: 1 H.P.		
		Coolant Pump motor: 1 H.P.		
		Hydraulic tank capacity: 50 litres		
		Standard Accessories :		
		Cross Saddle Lock		
		Built in wheel truing attachment		
		Standard Magnetic Chuck		
		Diamond holder & Diamond for magnetic chuck		
		Dust Exhaust equipment		
		Coolant Pump & fittings with tank		
		Precision sine vice width of jaws 100mm		
		Radius & Angular wheel forming attachment including diamond.		
		Service tools set.		
		One set of two grinding wheels with flange.		
10.	**Surface Grinder**	**Surface Grinder**		
		With magnetic chuck,		
		Table Size (mm): 200 X 500		
		Max. Grinding Length (Longitudinal): 460 mm		
		Max. Grinding Width (Crosswise): 220 mm		
		Standard Magnetic Chuck Size (mm): 200 X 450		
		Vertical Down Feed on Hand Wheel (mm): 0.02		
		Hand wheel Per Graduation (auto feed) (mm): 0.02		
		Grinding Spindle Drive Speed & Power 3 Phase: 2 H.P., 3400 rpm		
		Grinding Wheel Size (mm): 200 X 19 X 31.75		
		Drive Motor for X,Y, Z axes: 1 H.P.		
		Coolant Pump motor: 1 H.P.		

		Hydraulic tank capacity: 50 litres		
		Standard Accessories :		
		Cross Saddle Lock		
		Built in wheel truing attachment		
		Standard Magnetic Chuck		
		Diamond holder & Diamond for magnetic chuck		
		Dust Exhaust equipment		
		Coolant Pump & fittings with tank		
		Precision sine vice width of jaws 100mm		
		Radius & Angular wheel forming attachment including diamond.		
		Service tools set.		
		One set of two grinding wheels with flange.		
11.	**Planer machine**	Height of columns (Ft): 5		
		Width between columns (mm): 1500		
		Height under cross Rail (mm): 1500		
		No of T- Slots : 5		
		Width of T-Slots (mm) 20		
		Distance between T- Slots (mm): 145		
		Horizontal Traverse of tool holder (mm): 1150		
		Vertical Traverse of tool holder (mm): 300		
		Max. swivel of tool head Slide to either side (degree): +-50°		
		Max. Size of tool Shank (mm): 45 x 45		
		Swiveling of clapper box (mm): +-25		
		Vertical Traverse of cross rail (elevating) (mm): 1500		
		Elevating traverse of head (mm): 1300		
		Method of driving planer: Belt driven		
		Method of driving table: Rack & Pinion		
		Motor 960 RPM 2 H.P.		

		Standard Accessories:		
		Service tools		
		Two sets of cutting tools		

ANEXURE-VI

DETAILS OF EQUIPMENTS TO BE SUPPLIED AT VARIOUS IKGPTU CAMPUSES:

S. No	Equipment	Kapurthala	Amritsar	Batala	Bhikhiwind	Dinanagar	Total Quantity
A.	**Manufacturing Practices (Machine shop)**						
1	Lathe Machine	4	2	3	3	2	**14**
2	Shaper Machine	1	1	1	1	1	**5**
3	Radial Drlling Machine	1	1	1	1	1	**5**
4	Universal milling machine (32"x7")	1	1	1	1	1	**5**
5	Universal milling machine (40"x9")	1	0	0	0	0	**1**
6	Double ended bench grinder 1/2 HP	1	1	1	1	1	**5**
7	Double ended bench grinder 1HP	1	1	1	1	1	**5**
8	Power Hacksaw	1	1	1	1	1	**5**
9	Bench drilling machine	1	1	1	1	1	**5**
10	Surface Grinder	1	0	1	1	1	**4**
11	Planer machine	1	0	1	1	1	**4**