

TRADE MACHINIST COMP.

S.No.	Name of the item	Std List	Specifications
01	Steel rule 30 cm graduated both in English & Metric units	1	30 cm Standard Stainless Steel Metric/Inch Stainless Steel Etched Ruler with zero at the edge
02	Outside spring caliper 150 mm	2	150 mm Centrally mounted adjustment screw offers finer setting, than firm joint type
03	Hermaphrodite caliper 150 mm	3	150mm Centrally mounted adjustment screw offers finer setting, than firm joint type
04	Centre Punch 100 mm	4	Centre Punch Set is made from hardened and tempered steel. Square heads, knurled grip and polished tips. 80-100mm
05	Hammer B.P. 0.5 kg.	5	Variants include the straight Bal Peen Hammer 0.5kg With Wooden Handle
06	Cold chisel flat 25 x 200 mm	6	Chisel size: blade 25X200mm, Superior quality, long service life
07	File flat 2nd cut 250 mm	7	File flat 2nd cut 250 mm high carbon steel
08	File flat smooth 200 mm	8	File flat smooth 200 mm high carbon steel
09	Engineers screw driver	9	Standard screwdrivers are hand tools for tightening screws. They have a cylindrical handle with a metal shaft and drive bit.
10	Combination Plier 150 mm	10	combination plier 150mm have an induction hardened chrome nickel steel cutting face that stay sharper for longer and improve durability.
11	Safety glasses	11	2.5" Glass with Belt spectacles with anti-reflective coating on both sides
12	Surface plate 400 mm x 400mm grade	12	Surface plate 400 mm x 400mm grade make with high carbon steel
13	Table for surface plate 900 x 900 x 1200 mm	13	900 X 900 X 1200 mm with laminated top on steel frame
14	Marking off table 1200 x 1200 x 900 mm high	14	1200 X 1200 X 900 mm Marking, with laminated top on steel frame
15	Steel tape 2 meter in case	15	Steel tape 2 meter in case make with stainless steel
16	Steel rule 60 cm graduated both in English & Metric units	16	Steel rule 60 cm graduated both in English & Metric units make with stainless steel
17	Spirit level 2V 250, 05 meter	17	2V 250 , 05 meter simultaneous measuring or levelling of surfaces on machines
18	Hammer B.P. 800 gms. With handle	18	Variants include the ball peen make with forged steel
19	Spindle blade screw driver 100 mm	19	Make sure that the blade rotates in the correct direction. 100 mm
20	Spanner D.E. series 2 (set of 7 pieces)	20	Made of high quality chrome vanadium steel or carbon steel, .
21	Adjustable spanner 300 mm	21	300 mm Forged Chrome Vanadium steel construction for strength and durability. Wide handle for comfort under high torque loads.
22	Angle plate adjustable 250 x 150 x 175 mm	22	250 x 150 x 175 mm Manufacturer of Angle Plate, Cast Iron Angle Plate
23	Oil Can pressure feed 500 mg.	23	Oil Can pressure feed 500 mg. made high carbon steel
24	Twist drills 3 mm to 13 mm in step of 0.5 mm(parallel shank)	24	Twist drills 3 mm to 13 mm in step of 0.5 mm (parallel shank) made from high quality of high speed steel
25	Grinding wheel dresser Huntington type	25	wheel dressings and loose abrasives that include tungsten carbide or other hard alloys
26	Drill H.S.S. taper shank (6 mm to 12 mm in step of 0.5 mm)	26	6 mm to 12 mm in step of 0.5 mm high speed steel
27	File Half round 2nd cut 250 mm	27	250 mm make high carbon steel
28	File triangular smooth 200 mm	28	200MM make high carbon steel
29	Needle file set	29	make high carbon steel
30	File square 2nd cut 250 mm	30	250 mm make high carbon steel
31	Reamer 6 mm to 25 mm by 1 mm	31	6 mm to 25 mm by 1 mm 6 mm to 25 mm by 1 mm Carbide tips brazed to tough hardened alloy steel body

32	Tool bits H.S.S. 6 mm square	32	Tool bits H.S.S. 6 mm square High Speed Steel Tool Bits
33	Tool bits H.S.S. 10 mm square	33	Tool bits H.S.S. 10 mm square High Speed Steel Tool Bits
34	Tool bits holder (Armstrong) L.H	34	Tool bits holder (Armstrong) High Speed Steel Tool Bits
35	Tool bits holder (Armstrong) R.H.	35	Tool bits holder (Armstrong) High Speed Steel Tool Bits
36	shaper, slotter & planner in different shapes and sizes	36	Make high speed steel
37	Table chuck 75 mm jaw swivel base	37	75 mm jaw swivel base high Quality Grey Cast Iron
38	Machine vice 200 mm swivel base	38	200 mm , high Quality Grey Cast Iron
39	Hand vice 50 mm jaw	39	50 mm jaw high Quality Grey Cast Iron
40	Radius turning attachment	40	high Quality Grey Cast Iron
41	Angle turning attachment	41	Hardened replaceable bed and cross slide ways Taper turning attachment Swivel compound
42	Universal table angle plate	42	carbon steel
43	Shaper tool holder turret type	43	make with high carbon steel
44	Base chuck for slotter	44	hardened steel
45	shaper indexing center	45	make alloy steel
46	Knurling tools (set of 3) straight and diamond	46	2mm and 16mm centre height by means of mounting points on either end of the shank. 3 head knurling kit consisting
47	Plier cutting 200 mm	47	200 mm manufacturer of from high carbon alloy steel,duly hardend and tempered finishes insulation
48	Carbide tipped tools of different sizes and shapes (throw away tips)	48	Different Hardness based on sandik and CB carbide material
49	Hand hammer 1 kg. With handle	49	make forged steel 1kg
50	Cylindrical cutter 63 x 90 bore dia	1	make with high speed steel or ceramics 63*90 mm bore
51	Cylindrical cutter 80 x 90 bore dia.	2	make with high speed steel or ceramics 80*90mm bore
52	Side and face cutter dia 160 x 10	3	make with high speed steel or ceramics dia 80*8mm
53	Side and face cutter dia 200 x 20	4	make with high speed steel or ceramics 200*20 mm
54	Double angle unequal cutter 50 x 12 x 550	5	make with high speed steel or ceramics 50*12*55Degree
55	Double angle unequal cutter 50 x 12 x 600	6	make with high speed steel or ceramics 50*12*60 Degree
56	Double angle unequal cutter 50 x 12 x 700	7	make with high speed steel or ceramics 50*12*70Degree
57	Double angle unequal cutter 50 x 12 x 750	8	make with high speed steel or ceramics 50*12*75Degree
58	Single angle cutter 63 x 18 x 450 RH	9	make with high speed steel or ceramics 63 x 18 x 45Degree RH
59	Single angle cutter 63 x 18 x 450 LH	10	make with high speed steel or ceramics 63 x 18 x 45Degree LH
60	Slitting Saw cutter Ø 75 x 3 X Ø 27 mm	11	make with high speed steel or ceramics Ø 75 x 3 X Ø 27 mm
61	Slitting Saw cutter Ø 100 x 6 X Ø 27 mm	12	make with high speed steel or ceramics Ø 100 x 6 X Ø 27 mm
62	Shell End Mill Ø 50 x 36 x Ø 22 (preferably inserted tip type)	13	make with high speed steel or ceramics Ø 50 x 36 x Ø 22 (preferably inserted tip type)
63	Shell End Mill Ø 75 mm x 50 x Ø 22(preferably inserted tip type)	14	make with high speed steel or ceramics Ø 75 mm x 50 x Ø 22 (preferably inserted tip type)
64	Parallel shank end mills Ø6, Ø10 and Ø 16 are(double fluted), Ø 20 mm & Ø 25mm (four fluted)	15	make with high speed steel or carbide Ø6, Ø10 and Ø 16 are (double fluted), Ø 20 mm & Ø 25mm (four fluted)
65	'T' slot cutter with parallel shank- Ø 17.5 x 8 mm width x dia. of shank 8 mm	16	make with high speed steel or ceramics Ø 17.5 x 8 mm width x dia. of shank8 mm
66	Concave Milling cutter Ø 63 x 6 radius x Ø 27 mm	17	Ø 63 x 6 radius x Ø 27 mm These high speed steel cutters from relieved for milling convex half circles in all type of materials

67	Convex Milling cutter \varnothing 63 x 6 radius x \varnothing 27 mm	18	\varnothing 63 x 6 radius x \varnothing 27 mm These high speed steel cutters from relieved for milling convex half circles in all type of materials
68	Disc type form milling cutter (involute form -2 module, 20° pressure angle)	19	20° pressure angle) make with high speed steel or ceramics
69	Micrometer outside 0-25 mm	1	Carbide Tipped Measuring Faces. These Sets 0 to 25mm Insulated Steel Frame. Friction Thimble. Meets or Exceeds Federal Accuracy Specs.
70	Micrometer outside 50-75 mm	2	Carbide Tipped Measuring Faces. These Sets 50 to 75 mm Insulated Steel Frame. Friction Thimble. Meets or Exceeds Federal Accuracy Specs.
71	Micrometer depth gauge 0-200 mm	3	scale thimble and sleeve satin chrome finish, \varnothing 18 mm Measuring span 25 mm Spindle pitch 0,5 mm with spindle lock Micrometer Head Feed(0-200 mm) face (rod) 0.3 μ m Parallelism between measuring face (rod) and reference surface (base) (4+L/50) μ m L=max. measuring length (mm) Measuring surfaces Hardened, precision ground, micro-lap finish Base Hardened tool steel Measuring force 5-10 N
72	Digital micrometer 0-25 mm	4	Measuring range: 0-25 mm Resolution: 0.001 mm Accuracy: +/- 4 μ m Measuring force: 5-10 N Battery: CR2032 (included)
73	Direct reading vernier caliper 0- 300 (direct reading with dial)	5	100 equal divisions, each having a value of 0.05 mm, or as fine as 0.02mm
74	Digital vernier caliper 0- 300 mm	6	(140-135S) 0-300mm x 0.02mm Stainless Steel Mechanical Mono-Block Vernier Caliper
75	Vernier height gauge 250 mm	7	Gage Type: Height Gage Dial Height Gage Digital Height Gage Height Micrometer Surface Gage Gaging Technology: Air / Pneumatic Electronic Mechanical Range: Less than 0.2 inch 0.2 to 1 inch 1 to 12 inch 12 to 24 inch 24 inch and up
76	Vernier gear tooth caliper	8	Range mm: 1-25mm Reading mm: 0.02 a: 50mm b: 54mm
77	Combination set with 300 mm rule	9	Combination Set Square With Level Scribe & 12" 300 Mm Steel Metal Ruler Rule Set
78	Vernier bevel protractor with 150 m blade	10	Accurately machined surface for precise readings With Magnifying glass and acute angle attachment Two Blades 150mm and 300mm Least Count 5 ' Digimatic Electronic Type also available
79	Bevel gauge 200 mm	11	this 200mm Sliding Bevel has a Quality Steel Blade and can transfer angles from 0 to 360 degrees
80	Telescopic gauge 13 mm to 300 mm	12	make alloy steel
81	Sine Bar 200 mm	13	Sin Bar with centers 200 mm Made from high quality alloy steel
82	Center gauge 600	14	Centre Gauge com. 60°, 55° and 29° make staines steel
83	Slip gauge set (normal set) metric (for the whole institute)	15	Slip Gauge metric set (87 pieces in a Box) High Grade Steel / Carbide / Ceramic
84	Screw pitch for metric pitches (25-6 mm)	16	Screw Pitch Gauge Whitworth & Metric each staines steel
85	Limit plug gauges 5 mm to 25 mm by 2.5 mm	17	Plug Gauge 5 mm to 25 mm by 2.5mm Make staines steel
86	Ring gauges 5 mm to 25 m by 2.5 mm (GO & NO GO)	18	Plain Ring 5 mm to 25 mm by 2.5mm Make staines steel
87	Taper gauge M.T. No. 1, 2, 3, 4 & 5	19	Stainless Steel All increments permanently engraved Front side - Standard Back side - Metric
88	Planer gauge standard size	20	Make alloy steel
89	Magnifying glass 75 mm	21	MAGNIFYING GLASS 75 MM TEJCO MAKE HAND HELD STEEL RIM , GERMAN GLASS
90	Shaping machine 450 mm stroke (motorized) with all attachments	1	SHAPING MACHINE 450MM STROKE (MOTORISED) WITH ALL ATTACHMENTS.Specification: - Length of Ram Stroke -450, Length of Ram- 914, Length x Width Ram Bearing- 711x245, Max/min Distance of Table from Ram -406/89, Working Surface from Table -381/279, Max. Horizontal Table Travel -457, Max. Vertical Table Travel - 305,

			Angular movement of Table+60 DEG, Max Tool Shank Size - 30x16, Max. Vertical Travel of Tool Slide -152, Max. Swivel of Tool Head - +60 DEG, Diameter of Clutch Pulley- 311, Number of Ram Speed/Strokes – 4, Range of Ram Stroke per min.- 17 to 75, Diameter of Motor Pulley – 89, Range of Table Feed/Stroke - 0.22 / 0.88, Tool Head Feed- Hand Feed, M
91	Surface Grinding Machine with minimum specification as: Grinding machine plain surface, wheel dia175 mm (or near) with reciprocating table having longitudinal table traverse 200 mm (or near) fully automatic and fitted with adjustable traverse stops, machine to be fully motorized and fitted with ace guards and pumps, tank and pump fittings and also to be supplied with magnetic chuck 250 x 112 mm. Diamond tool holder, set of spanners, grease gun, oil-can and spare grinding wheel for general purpose grinding.	7	The Machine is Built of Heavy duty cast iron with high Grade cast iron base hand Scraped to fine tolerance to Achieve highest Accuracy. Designe Make Easy Movement of Table Slide. By Proviing V-ways and flat ways duly hand Scraped to fine Tolerance to Achieve Highest Accuracy.The Grinding Wheel spindle is hardened & Grounded. The Spindle Runs in Precision angular Contact Bearings and driven by flange Mounted Motor though Flexible Couplings, Ensuring through Free Service for a long life.Vertical Grinding wheel Slide Movement down at right side in the body The Vertical wheel dial least count in 0.01 mm. and Micro feed least count un0.002 mm.
92	Double ended Pedestal Grinder with 178 mm wheels(one fine and one rough wheel)	3	Heavy duty, C.I. body double ended pedestal grinder M/C duly fitted with 0.5 HP motor AC/ 220/230V.R.P.M.;-2880with rotary switch, a pair of grinding wheels of size 6'x1"x1/2" (one rough & one smooth) a pair of eye shield for Spark protection& a pair of C.I. brackets as tool rests, duly mounted on M.S. Fabricated pedestal stand. With diamond wheel dresser & maintenance kit
93	Silicon carbide grinder for carbide tipped tools	2	" Heavy Duty Bench Grinders with Built in Dust Collectors are specially designed for collection of dust generating during the grinding process. These are mounted on a rigid steel frame. This machine is directly driven by heavy duty Drive 2.2 KW 3 H.P, 3 Phase 50 cycles, 1440 RPM complete with starter, Two Grinding Wheels 14" x 2" Green silicon carbide coarse GC- 100/GC120), heavy wheel(Coarse – GC46/GC60, Medium- GC-80, Fine- duty M.S Wheel Guards, Job Rests. Dust Collector Motor 1.5 H.P 3 Phase Dust Collector is fitted with a manual shaker. Dust Drawer, Big Filters, 2 Nos Suction Inlet dia. 100 mm
94	Horizontal Milling Machine with minimum specification as: Table Length x width 1200 x 300 mm having motorized up & down movement along with auto feed arrangement and 150mm Universal vice.	5	Working Space - 1300 x 300, T.Slot Nos/ Size - 3.16, T.Slot Centre – 70, Swivel - + 45o, Longitudinal Travel By Power X – 700, Cross Travel By Power Y – 215, Vertical Travel By Power Z – 450, No. of Feeds – 18, Range of Longtitude Feed/Min - 23-420, Range of Cross Feed/ Min. - 23-420, Range of Vertical Feed/ Min. - 3-70, No. of Rapid Feed – 1, Rapid Long & Cross/ Min. –1050, Rapid Vertical/ Min. – 175, No. of Spindle Speeds. – 12, Range of Spindle Speeds - 40 to 1200 RPM, Spindle Taper - ISO – 40, Arbor Diameter– 25.4, Main Motor - 3 H.P, Feed Motor - 2 H.P, Coolant Motor - 0.1 H.P
95	Universal Milling machine with minimum specification as: Table Length x width 1200 x 300 mm having motorized up & down movement along with auto feed arrangement and with following attachments such as:	4	Working Surface mm - 1050 x 250, Number of T-Slots -3, Width of T-Slots 15 mm, Pitch of T-Slots - 62 mm, Maximum Distance from Spindle Centre to Underside of Over Support - 125 mm, Longitudinal Movement of the Table by Lever / Screw - 600 mm, Cross Movement of the Table by Screw - 230 mm, Vertical Movement of the Table by Screw - 450 mm, Spindle Bore - 17 mm Inside Taper - ISO – 40, Arbor - 25.4 mm, Number of Spindle Speed – 6, Range of Spindle Speed - 50, 85, 110, 240,350,525 RPM, Number of Feeds -3 Feeds, (0.9, 1.4, 2.25, Per Minute),

	<p>a. Vertical head b. Slotting attachment c. Rack cutting attachmentd. Rotary table e. Dividing head f. Adaptors, arbors and collects etc. for holding straight shank drills and cutters from 3 mm to 25 mm.</p>		Main Drive Electric Motor -2 HP, 1440 RPM, 440 V / 3 Phase , Coolant Motor 0.11 KW 2700 RPM Coolant Tank Capacity - 20 Ltr.
96	Cylindrical grinder Max. grinding length 300 mm Height of centre 130 mm Max. distance between centers 340 mm	8	Height of centre – 125mm, Distance between centre – 300mm, table Maximum swivel - 7+3 degree, Speed approach - 300/3000 mm/min., Dwell at ends of stroke - 0 to 20 sec., Wheel Head WheelSpeed – 2100 rpm., Rapid approach – 35mm, Work Head No of spindle speed -3, Range of spindle speed - 70-140,125-250 rpm.
97	CNC Milling Machine/Vertical Machining Centre with minimum specification as: Table size:500x250mm Travel X-axis x Y-axis x Z-axis: 300 x 250 x 250mm Auto Tool Changer: 8 nos. Spindle power: 3.7kW(continuous rating) with popular control system like Fanuc/Siemens or equivalent along with motorized coolant system.	9	Table size:500x250mm Travel X-axis x Y-axis x Z-axis: 300 x 250 x 250mm Auto Tool Changer: 8 nos. Spindle power: 3.7kW (continuous rating) with popular control system like Fanuc/Siemens or equivalent along with motorized coolant system.
98	<p>a) Multimedia based simulator for CNC technology and interactive CNC part programming software for turning & milling with virtual machine operation and simulation using popular operation control system such as Fanuc, Siemens, etc. (Web-based or licensed based) (10 trainees + 1 faculty) b) Desktop with MS-Windows-7 or latest to run above software, networked on LAN.</p>	10	<p>Off-Line Training Software / Simulator (1+10) each for Turning & Milling (Total – 11 Seats) - 11 Nos. CNC Simulator – Industrial Type Control Keyboard with TFT - Siemens 810D/840D Turning/Milling – 1 Each - GE Fanuc Series .21 Turning/Milling – 1 Each - With 3D-View Turning & Milling – 1 Each With Software's.</p>
99	CNC milling tools assorted such as adapters to suit above machine to accommodate face cutter, shell end mill cutter,taper shank and parallel shank drills/cutters.	11	As required
100	CNC hole machining tools assorted such as adapters to suit above machine to accommodate different boring bars.	12	swing over bed 800-1000mm ,swing over cross slide 200mm,speed range 1-1120 RPM,drive 50-80KW
101	LCD projector / large screen TV	13	16 mm (0.63") diagonal, (4:3 aspect ratio) 786,432 pixels (1,024 x 768) x3