

Tender Document (Corrigendum)
on
***Procurement/Supply of various equipment/
machines/software for Mechanical Engineering Department***

Last date of submitting Tender Document:22/03/2019 by 3.00 p.m.



Pathfinder for Excellence in Technical Education

Mechanical Engineering Department
NATIONAL INSTITUTE OF TECHNICAL TEACHERS' TRAINING AND
RESEARCH, KOLKATA

Block-FC, Sector-III, Salt Lake City,
Kolkata- 7000 106



**NATIONAL INSTITUTE OF TECHNICAL
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CORRIGENDUM

Reference this Institute Advt. No. 14/2018-19, corrigendum in respect of Item No-1 issued be perused. For details refer to institute website. The last date and time of submitting tender document is extended to 22/03/2019 upto 3 PM. Tender will now be opened at 4 PM on the same date.

Advt. No. 16/2018-19

Director



**NATIONAL INSTITUTE OF TECHNICAL
TEACHERS' TRAINING AND RESEARCH
(Under Ministry of HRD, Govt. of India) BLOCK
FC, SECTOR III, SALT LAKE CITY,**

KOLKATA- 700 106

CORRIGENDUM

TO

**SUPPLY OF VARIOUS EQUIPMENT/MACHINES/SOFTWARE FOR
MECHANICAL ENGINEERING DEPARTMENT, Advertisement No: 14/2018-19**

With respect to the above subject kindly make the following amendment for the item no.1 (**3D (PRINTER WITH SCANNER & SOFTWARE)**) of the Advertisement No: 14/2018-19.

Page no. 5:

FOR

1. 3D PRINTER WITH SCANNER & SOFTWARE (Estimated Rs. 20 Lakh) Qty:01

Specification	
Maximum Printable Area:	(X) 305 mm x (Y) 205 mm (Z) 575 mm - (12"x 8" x 23") or more
Filament Diameter:	1.75 mm to 3 mm (depending on the extruder)
Extruder Diameter:	0.4 mm to 0.6 mm Extruder Temperature: 50 °C to at least 250 °C
Number Of Extruders:	Single
Material Supports:	PLA, Soft PLA, Flexible, WOOD, PVA, ABS XY
Axis Resolution:	200 microns (0.200 mm)
Z Axis resolution:	100 microns (0.100 mm)
Print Head Speed:	50 to 200 mm / second (depending on quality/polymer)
Layer Thickness:	0.07 to 0.15 mm (with one nozzle)
LCD Support:	Yes
SD Card Support:	Yes
SD Card Memory:	8 GB or more
Power Supply Unit Outside:	110-240V, 50/60Hz, 2-2.2A (input), and takes standard IEC cable
Run Time Change Setting Option:	Nozzle Temperature, Fan Speed, Print Speed, Feed Rate etc.
Slicing Software:	
Complimentary software	
Software should support 3D digital files into buildable model files	
Should run on 32 and 64 bit operating Systems Windows XP, 7, 8, Vista	

Clear, familiar and easy-to-use interface
Scaling, rotating and movement of parts on a simulated print bed
Ability to create custom profiles as needed
Imperial/metric conversion available

READ

1. 3D PRINTER WITH SCANNER & SOFTWARE (Estimated Rs. 20 Lakh) Qty:01

1.1 3D Printer

S N	Features	Description
1	Basic Technology	i) Ability to create high quality 3-D print based on Fused Deposition Modelling (FDM) Technology ii) Must have provision for automatic bed levelling/calibration iii) Ready for upgradation/expansion options to higher configuration iv) Ability to print even without computer, through inbuilt USB port/Micro SD card (Preferable) v) Should be compatible with large volume extruder
2	Filament type and support	i. Ability to support a wide range of ABS, PLA, Nylon ii. Ability to support other materials like clays, PVA, PET, PP, PC, PEEK (Preferable) iii. Minimum filament weight in filament cartridge 500 gm iv. Versatile filament cartridge to accommodate more than one type of filament (Preferable) v. No proprietary cartridges or restriction on filament sourcing for printers.
3	Filament Diameter	1.5 mm to 3 mm (depending on the extruder)
4	Nozzle Dia	Should be capable of supporting multiple Dia Nozzles
5	Nozzle working temperature (°C)	Up to 450 or better
6	Extruders	Modular
7	Layer thickness	100 microns to 0.25 mm or better
8	Accuracy	± 200 micron for 3D print
9	Support material	Support material should be easily removable to obtain high quality surface finish on printed part
10	Build size	400 mm x 600 mm x 250 mm or better
11	Interface	Tablet PC with: <ul style="list-style-type: none"> • USB: Four USB 2.0 Ports (External) • WLAN: WiFi Capable (Preferable)

12	Software	<ul style="list-style-type: none"> i. Complimentary software ii. Pre-processing and slicing iii. Support Windows/Mac iv. Clear, familiar and easy-to-use interface v. Ability to create custom profiles as needed (Preferable) vi. Imperial/metric conversion available (Preferable)
13	Others	<ul style="list-style-type: none"> • Power requirement: Standard, 220-240 VAC, 50/60 Hz • On board integrated camera • Smooth move motion control • Emergency on/off switch • Should be Rugged, all-metal design • Body: Powder coated steel or better
Mandatory Conditions	Warranty	Five years
	Safety	Safety feature for hot surface
	Others	Installation, demonstration, training and operating manual

1.2 3D Scanner

S N	Features	Description
1	Measurement System	Multi Stripe Laser Triangulation (MLT) Technology.
2	Object size	No preset limit, objects larger than field can be assembled with supplied software.
3	Field size	Around 5.1"x3.8" (Macro) and around 13.5"x10.1" (wide); Extended Mode: 22.5" x 16.75" or better
4	Resolution	3D point density on target surface is 400 dpi or better in macro mode and 150 dpi or better in wide mode.
5	Dimensional accuracy	Up to $\pm 0.005''$ or better in Macro Mode and $\pm 0.015''$ or better in Wide Mode
6	Acquisition speed	About 50000 processed point/sec throughput or better. Around, 2 minutes per scan of each facet.
7	Sensors	Twin 5.0 megapixel or better, CMOS image sensors.
8	Auto Drive	High precision rotary indexing table (positioner), servo positioned, auto controlled by scanner or better. Load capacity: 20 lb or more.
9	Part gripper	Universal part holder to adjust height, angle and operation of capture. Capacity: 10 lb or more
10	Power requirement	220-240 VAC, 50/60 Hz.
11	Scanning Software	<p>Basic features</p> <p>Scan: Control Scanner & auto drive</p> <p>Align: Automatic alignment of scan sets</p> <p>Fuse: Merge scan into single mesh model</p> <p>Advanced features (Preferable):</p> <p>Processing (2x speed): Smart to reduce edge artifacts & noise</p> <p>4x sampling: Higher quality points through over sampling</p>

		Large area: Ultra-wide mode around 23x17 inches depth over 30 inches (approx.) 4x Density: 4 times more point (4 million approx.)
12	Photo Surface	Optically synchronous 7-color surface capture for precision-locked geometry correlation.
13	Interface	USB 2.0 high-speed interface. USB cable should be included.
14	Typical Dataset	Around 200 MB for typical model, based on 10 facet scans or better
15	Reverse Engineering Software	Compatible software with at least 3 User License
16	Minimum System	Compatible with Windows7 (64-bit) or better
Mandatory Conditions	Safety feature	Should be safe for operator eyes
	Warranty	Five years.
	Others	Installation, demonstration, training and operating manual

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FOR

Total Estimated Price of Tender is Rs. 274, 00,000/- (Rupees 2 crores seventy four Lakhs)

READ

Total Estimated Price of Tender is Rs. 281, 00,000/- (Rupees 2 crores eighty one Lakhs)

Other terms and conditions shall remain the same. The Tender Documents with detailed requirements and other terms & conditions can be submitted as per the dates mentioned below:-

Sale of Tender Document	Last Date & Time of submission of Tenders	Tender opening at NITTTR, Kolkata
02 / 03/ 2019 to 22/ 03 /2019 (11:00 AM to 3:00 PM)	22/ 03 / 2019 Up to (3:00 PM)	22 / 03 / 2019 4.00 PM onwards

Advertisement No.: 16/2018-19