**Department of Life science and Bioinformatics,**
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# INVITATION FOR TENDER

**Ref. No. DBT/BT/553/NE/U-Excel/2016/Equipment/01 dated 29.04.2016**

Assam University, Silchar, a central university invites sealed Tender from reputed manufacturers / authorized distributors / authorized firms with sound technical capabilities for supply, installation and commissioning of the following items to be procured under DBT,Unit of excellence project in the Department of Life science and Bioinformatics, Assam University, Silchar. Detailed technical specifications including make/model/accessories and price including taxes should be quoted against each item separately. All terms and conditions will be as per Assam University, Silchar rules, regulations anddecisions.

| Serial No. | Particulars of the equipmentswith minimum specifications |
|---|---|
| 1 | **Real time PCR**<br>• Real time PCR with block of 96 x 0.2 ml tubes or plate to Run typical 0.2ml tubes, strips, and plates.<br>• The base thermal cycler should be able to be used for standard PCR without switching on the optical module / LED to have a increased life time of the optical device.<br>• System should be **Gradient enabled.** With 8 different temperature zones.<br>• Minimum six excitation and Six emission channels Each filter should correspond to one dye that ensures smooth differentiation of dyes having high degree of spectral overlap.<br>• 21 or more colors in the emission range.<br>• **Detection of 5 or more** different fluorescent reporters in the same tube.<br>• Should be capable of Detecting Cy5, FAM/Sybr Green, VIC/JOE, TAMRA/Cy3, Texas Red, Quasar705<br>• System should be able to collect data for all filters for all wells regardless of place setup.<br>• Maximum Ramping speed : 5 $^{O}$C per sec<br>• Peltier Cooling & Heating for uniform temp control<br>• Should have a channel dedicated for FRET experiments<br>• Excitation –Emission range: 450- 730nm.<br>• No internal reference dye should be required. True 5 Color Multiplexing with use of 5 different flourophores without the need of addition of any internal reference dye,<br>• LED excitation source with Photodiode Dynamic range of 10 orders.<br>• Open system capable of running various chemistries so that Different chemistries using TaqMan, Molecular Beacon, SYBR green etc all can be performed.<br>• Temperature range 0– 100 $^{O}$C with accuracy of ±0.2 $^{O}$C and uniformity of ±0.4 $^{O}$C within 10 sec of arrival at 90 $^{O}$C<br>• The system should be able to detect 1 copy of template for a single reaction. |

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| | • Minimum sample vol : 1µl Max: 50uL<br>• Should detect ≤ 10 fmol of fluorescein<br>• Should have multiple scan modes with a FAST scan option for reading all wells in 3 seconds<br>• Automatic allelic discrimination by end point fluorescence or threshold cycle.<br>• Gene expression analysis by relative quantity (ΔCt ) or normalized expression (ΔΔCt).<br>• End point analysis for upto 5 fluorophores<br>• Should have mode for Melt curve analysis<br>• Should be capable to perform dye binding thermal shift assays for protein unfolding analysis.<br>• Comparison of upto 5000 Ct values from different data files should be possible<br>• The amplification traces should be viewed on the LCD screen in real time while a run is in progress with touch screen facility.<br>• Software should have express load feature which allows entry of data after experiment.<br>• Should be licensed for Research & IVD applications.<br>• System should be compliant with the MIQE Guidelines<br>• System should provide the option of software which is RDML compliant<br>• Software should be license free.<br>• Software should be capable to import and analyze data from any real time PCR platform.<br>• Additional QBase Plus software should be quoted along with the system.<br>• Should be provided with a suitable branded Computer & 2 KVA Online UPS for analysis.<br>• Should be supplied with a gradient PCR of the below mentioned specification.<br>• Should have a sample capacity of 96x0.2ml tubes, 0.2ml tube strips or universal or standard 1x96-well plate of 8x12 format with six or more Peltier heating and cooling.<br>• System which are not capable of taking plates will not be considered.<br>• Should have true gradient capability with Dynamic ramping technology , other technologies apart from gradient will not be considered.<br>• Should have the feature of dynamic ramping with identical hold times for all the 8 rows of gradient.<br>• Should have a temperature differential range of 1-25degC across the rows.<br>• Should have intuitive 5.7” (14.5 cm) touch screen interface which can displays graphics in high resolution for easy programming.<br>• The touch screen should be responsive for both gloved and ungloved fingers.<br>• Should be capable of running reaction volumes from 1-100ul.<br>• Should have a maximum ramp rate of 4 degC/second.<br>• Should have a temperature range of 4-100 deg C<br>• Should have a gradient range of 30-100 deg C<br>• Should have a temperature accuracy and uniformity of ±0.5 deg C<br>• Should have a memory of >500 programs with further expansion through a USB Flash drive for transfer of files.<br>• Should have block and calculated temperature control modes.<br>• The software should be capable of exporting Run logs and system error logs<br>• Should have quick boot up time of not more than 1 min.<br>• Should be quiet in operation.<br>• System should have built in library of standard protocols for long PCR, fast PCR, reverse transcription PCR etc.<br>• Should have the feature of “Instant Incubation” to keep samples at constant temp for ligation and restriction digests.<br>• Should have power save mode. |

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| | • Should be compatible with all kind of plastic consumables and reagents specially reusable sealing Mats.<br>• The vendor supplying the Instrument should also have the capability of supplying cDNA Synthesis Kit, Hot Start Taq Polymerase, plastic ware, and horizontal electrophoresis system with power pack from the same Principal Company<br>• Instrument should be quoted with following consumables :<br>1000 Hard Shell 96 white well Plates& 1200 Sealers compatible with machine<br>500 Reaction Single Tube cDNA synthesis kit which should be liquid in -20C<br>300 ml Reagent to isolate RNA by Organic extraction method<br>Sybr green/ Eva green Supermix, 100 ml for 10,000 x 20 µl reactions. |
| 2 | **Cooling Centrifuge**<br>• Capacity: minimum 1.6L<br>• Temperature range: -10 °C to +40 °C<br>• The Centrifuge should have a feature to install and remove rotor without tool in less than 5 seconds with just a push of a button for quick and easy change of rotors for different applications.<br>• The centrifuge must have a minimum of 6 “direct recall” program keys.<br>• Centrifuge should have advanced imbalance technology that adapts for specific rotors<br>• The centrifuge must be CE, CSA and UL certified for safety containment.<br>• The rotor should be certified for bio-containment by a 3rd party lab of worldwide recognition.<br>• The angle rotors must be manufactured from a highly corrosion and fatigue resistant Carbon Fiber material. The Fixed Angle Carbon Fiber rotors should be warranted for at least12 to 15 years<br>• The centrifuge must be capable of running Fixed Angle Carbon Fiber Rotor of 6 x 100-85 ml, 50/15ml conical tubes at speeds of at least 18000 xg.<br>• The centrifuge must be capable of running a minimum of 6 microplates of standard footprint and height at rpm minimum of 4,000.<br>• The centrifuge must be capable of running a minimum of 30 x 1.5/2 ml disposable microtubes at speeds of at least 25800x g in certified sealed conditions<br>• The centrifuge must be capable of running out Swing out Rotor up to 76 x 5 ml or 7 ml blood collection tubes and 56 x 10 ml blood collection tubes in certified sealed conditions.<br>• The centrifuge must be capable of running up to 4 x 400 ml bottles in swing-out configuration and in certified sealed conditions.<br>• Warranty on the centrifuge is of minimum of 2 years. |
| 3 | **Plant growth Chamber**<br>• Chamber Volume: 300 L / 10.6 Cu ft<br>• Control System: Microprocessor PID<br>• ControlTemp. Range: 5 to 50°C Light off, 10 to50°C Light on<br>• Tem. Fluctuation at 25°C: 0.1°C withouthumidity<br>• Tem. Variation at 25°C: 0.8°C without humidity<br>• Illumination Range: 0 to 20,000 Lux<br>• Illumination Control Steps : 10<br>• Illumination Lamp: FL Lamp ( 32W x 18EA)<br>• Humidity Range: 40~80 RH% at 20~35°C.Tem<br>• Heater power : 750<br>Accessories must included:<br>• 3 wire shelves<br>• Safety Functions:<br>• Leakage breaker for Power supply<br>• Over Current protection<br>• Over heat protection with alarm |

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| | • Door open alarm.<br>**3 years ON SITE Warranty is a must** |
| 4 | **Nanodrop**<br>• **A UV-visible spectrophotometer with microplate reading option.**<br>• A monochromator based UV/Vis spectrophotometer with Xenon Flash lamp as light source and photo multiplier tube (PMT) as detector, for better performance.<br>• The system is able to read 96 & 384 well plates**. Should have the facility of 16 samples analysis in 2ul quantity at a time.**<br>• Instrument is able to provide the wavelength range from **200nm to 1000nm** with 1 nm steps.<br>• It should have spectral scanning option for standardizing new assays.<br>• The applications include nucleic acid quantification, protein assays, enzyme kinetic assays, immunoassays (ELISA), cell toxicity assays, apoptosis and reporter gene assays.<br>• The instrument has inbuilt **incubation** and **linear shaking** options for ELISA, enzyme kinetic assays etc.<br>• Incubation temperature: from ambient +4 $^0$C to +45 $^0$C.<br>• Measurement speed should be 6 sec. for 96 well and 10 sec. for 384 well plate<br>• It should be an open system and able to accommodate any consumables from any manufacturer.<br>• Instrument has an option for pathlength corrections to correlate the microplate data to cuvette, in case of nucleic acid quantification performed on microplate.<br>• It has Power Save function for reduced energy consumption when the instrument is 'on' but not in use.<br>• It should run in stand-alone mode OR with computer & software controlled.<br>• The instrument has a memory of 100 inbuilt protocols in stand-alone mode and has color display for better visualization.<br>• Analysis software should be supplied with the instrument and has unlimited user system license.<br>• The instrument has USB port for the easy data transfer.<br>• It should have a self diagnostics option to give a guaranteed high quality data.<br><u>Analysis software should have:</u><br>1. The calcuation, performedin compliance with the European Pharmacopoeia guidelines.<br>2. Spectral scanning measurement and calculations<br>3. Cuvette layout<br>4. Pathlength correction<br>5. Possibility to import results from internal software<br>6. Compatible with Windows Windows 7& Windows 10<br>7. Parallel Line Analysis (PLA)<br>8. Improved Quality Control calculation<br>9. Improved User-equation calculation<br>10. Layout, protocol, calculations and reports can be edited freely |
| 5 | **Autoclave**<br>• A Digital, preset Temperature Controller (121ºC)cum Timer (20 minutes).<br>• The Controller linked toTimer,End cycle buzzer and auto cut-off ofheater.<br>• Lid fitted with pressure gauge, safetyvalve, manual exhaust valve and vacuum breakercum purge valve.<br>• Moulded rubber gasket.<br>• Stainless Steel Dressing Drum and heater coverstand.<br>• Drain valve on side at bottom for easy cleaning<br>• All internal joints argon welded, ground and polished to give crevice free |

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| | internals<br>**2 years ON SITE Warranty is a must** |
| 6 | **Oven**<br>• Temperature is controlled by LCD GRAPICAL DISPLAY<br>• Temperature range: 20-250 degree Celsius Resolution $0.1^0$C<br>• Auto tune Advanced PID temperature controlled.<br>• Audio Alarm on temperature deviation from set point/Process Complete.<br>• Timer Disable option for continuous running.<br>• Visual Alarm Led indication for Temperature Deviation/Heater/Fan/Timer.<br>• Fan Timer Inbuilt to give rest to Fan Motor Periodically |
| 7 | **Incubator**<br>• Inner Chamber & Outer chamber Coated with plexl glass Inner door.<br>• Variable Speed from 20 RPM to 250 RPM.<br>• Digital display of Speed with preset Facility.<br>• Shaking amplitude 25 mm.<br>• Universal Platform to accommodate Interchangeable clamps of assorted sizes for different capacity of flasks.<br>• Automatic restart at preset speed in case of power failure.<br>• Digital Display Temperature Controller.<br>• The unit is fitted with air circulation fan for temperature uniformity. |
| 8 | **Electronic Balance**<br>• Readability : 0.0001g<br>• Capacity : 220 gms<br>• Pan Size : Ø 91<br>• Main Body Dimensions (mm) approx. : 210(W) x 340(D) x 325 (H)<br>• Weight (kg) approx. : 6.2 Kg<br>• Power Requirement : 12V, 1A<br>• Touch-key Calibration ( Internal Calibration)<br>• Easy setting Best fit to weighing application |
| 9 | **Vortex**<br>• Should have 3 attachments for shaking tubes, flasks and microcentrifuge tubes.<br>• Speed regulator and switch for constant on and touch on.<br>• Heavy metal base and rubber feet<br>• Maximum spped:3000 rpm |
| 10 | **Liq. N2 Container**<br>1. Capacity: 150 of 2ml vials<br>2. Applications: Portable Sample Storage Vessel<br>3. At least 6 no. of canister should be supplied<br>4. Neck Diameter: 2 inch<br>5. Static Evaporation Rate should not be more than 0.1 L / Day.<br>6. Static Holding Time should be at least 225 Days<br>7. Warranty of minimum of 5 years |

## TERMS and CONDITIONS:

1. The tenders complete in all respects should be addressed **Prof. Sanjib Kumar Panda, Principal Investigator ,Department of Life science and Bioinformatics, Assam University, Silchar-788011, India**.

2. The tenders for equipments must be submitted in two-bid system (Technical and Financial). The tenders shall be submitted item-wise in two separate sealed covers clearly mentioning on the envelope the details of items for which bid is submitted. The format for the same is encloses in the Annexure. ONLY TECHNICALLY accepted competitive bids will be considered for placing Purchase Order.**Last date and time for receipt of Tenders: 30/06/2016 during the office hours up-to 5.00 pm. Date of opening Tenders: 11/07/2016 at 11.30 am.**

3. The technical bids should include all the specification for each part complete with part numbers of main equipments and accessories. **The technical details should be supported by original brochure/documents for each component.**

4. Tenders by e-mail, Fax, Telex, Telegram will not be accepted. Tenders must be submitted in sealed envelope only clearly indicating "**TENDER FOR ITEMS FOR DBT/BT//553/NE/U-Excel/2016/Equipment/01"**addressed to undersigned**.** The university shall not be responsible for any delay in receiving tenders.

5. In case of any modification in specifications / terms and conditions / any clarification to the bid document, it will be hosted in the university website only and the bidders are requested to log to our website from time to time and no separate corrigendum will be issued in this regard.

6. The rate should be exclusive of taxes and applicable tax should be clearly indicated. The rates should be quoted along with supporting documents of specifications, technical features,list of users and authorized dealership documents (if applicable).

7. **A certificate from vendors mentioning the place of manufacturing of the all the components of the equipment along with a certificate that the equipment supplied is newwithout any defect must be supplied to qualify for Technical bid.**

8. AFTER SALES SERVICE: Details of availability of after sales support will have to be furnished. The offer shall clearly state full details of the service after sales facility available for the equipment. The details shall include & qualification of service personal stationed at the service centre, response time in case emergency, availability of spares, etc. The offer shall also give the amount and other terms & conditions for annual service contract of the equipments after the expiry of the guarantee/warrantee period.

9. **The university is exempted from paying Customs and Excise duty.**

10. Proprietary items should be quoted with sole Manufacturer / Dealership certificate. Withoutdealership or manufacturer's certificate no bids will be accepted.

11. No advance payment will be made. However, if items are of foreign origin, advance payment can only be made in the form of vide LOC/FDD/Wire Transfer. **Performance Bank Guarantee must be submitted as per rules covering warranty period.**

12. **Items of foreign origin should have insurance up to installation site.**

13. If any item / equipment delivered in damaged condition, the equipment should be replaced with new one immediately.

14. Items of foreign origin should have insurance up to installation site. In case of equipment of foreign origin, the Indian dealer/agent should submit one undertaking on non-judicialstamp paper, stating that if any equipment delivered in damaged condition they will be liable to replace the same with a new one (applicable only when order is placed).

15. The invitation for bid is open to all OEM (original equipment manufacturer) or their authorized dealers. The principal company may authorize their dealer to participate in the quotation and authorization letter must be attached with the quotation document.

16. Copies of valid Central/State sales tax registration certificate, Income tax clearance certificate, proof of manufacturing unit/dealership & general order suppliers and copies of two major supply orders executed during the preceding two years for Govt. depts. /PSUs and Central Autonomous bodies have to be submitted.

17.The equipment will have to be installed by the supplier /Agent in the Department of life-science & bioinformatics within 4 weeks , from the receipt of equipment, free ofcharges.

18. Price quoted for the material/equipment shall be firm and valid for 60 days from the date of opening.

19.Tenders not conforming to the terms and conditions and procedure so outlined or Tender incomplete in any respect is liable to be summarily rejected.The university reserves the right to accept or reject any or all the bids without assigning anyreason whatsoever.

20.Special discount/rebate: Special discount/rebate admissible to Educational Institution/Central University may be specifically indicated in the quotation.

21. If there be any dispute,it will be referred to an arbitrator to be appointed by the University for his decision and award. The award or decision of the arbitrator shall be final and binding on both parties.

Those bidders, who accept the above terms and conditions, may submit their tenders in the prescribed format along with all relevant documents/brochures to the undersigned. The tender must also submit a certificate in their official letter head duly signed and sealed starting that all above terms and conditions are acceptable to them.

Sd/-
Prof. Sanjib Kumar Panda
Principal Investigator, DBT U-Excel Project
Department of Life science and Bioinformatics,
Assam University, Silchar-788011, India.

**Copy to:**

1. Copy to Secretary to VC, AUS for VC's kind information
2. The Registrar, AUS
3. The Finance Officer, AUS
4. Internal Audit Officer, AUS
5. Director, Computer Centre, AUS for uploading in the university website (www.aus.ac.in)
6. File for record

**PROFORMA FOR SUBMISSION OF TECHNICAL BID (TB)**

From
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To,
Prof. Sanjib Kumar Panda
Principal Investigator, DBT U-Excel Project
Department of Life science and Bioinformatics,
Assam University, Silchar-788011, India.

With reference to your advertisement dated published in the Newspapers and posted at Assam University Website, I / We hereby submit the Technical bid for the _____ required by you. I / We confirm that I / We are the owners /authorized person to offer you the item as per the desired specifications.

Fill the appropriate table as applicable for the items separately

**1. Real time PCR**

| S.NO | TECHNICAL SPECIFICATION | DETAILS TO BE FILLED BY BIDDER |
|---|---|---|
| 1 | Gradient enabled | |
| 2 | No. of fluorescent reporters in the same tube | |
| 3 | Excitation –Emission range | |
| 4 | Temperature range | |
| 5 | Sample volume details | |
| 6 | Express load feature | |
| 7 | Compatible with Windows Windows 7 & Windows 10 | |
| 8 | Any other | |

**2. Cooling Centrifuge**

| S.NO | TECHNICAL SPECIFICATION | DETAILS TO BE FILLED BY BIDDER |
|---|---|---|
| 1 | Capacity | |
| 2 | Temperature range | |
| 3 | Function for quick pre-cooling | |
| 4 | Digital Display | |
| 5 | Any Other | |

**3. Plant Growth Chamber**

| S.NO | TECHNICAL SPECIFICATION | DETAILS TO BE FILLED BY BIDDER |
|---|---|---|
| 1 | Chamber Volume | |

| | | |
|---|---|---|
| 2 | Control System | |
| 3 | Temperature Control details | |
| 4 | Illumination details | |
| 5 | Power conditions | |
| 6 | No. of Shelves | |
| 7 | Door Type | |
| 8 | Any other | |

**4. Nanodrop**

| S.NO | TECHNICAL SPECIFICATION | DETAILS TO BE FILLED BY BIDDER |
|---|---|---|
| 1 | Microplate reading option | |
| 2 | Xenon Flash lamp | |
| 3 | wavelength range from 200nm to 1000nm | |
| 4 | Inbuilt incubation and linear shaking options | |
| 5 | Incubation temperature:+4°C to +45°C | |
| 6 | Option for pathlength corrections to correlate the microplate data to cuvette | |
| 7 | Compatible with Windows Windows 7 & Windows 10 | |
| 8 | Any other | |

**5. Autoclave**

| S.NO | TECHNICAL SPECIFICATION | DETAILS TO BE FILLED BY BIDDER |
|---|---|---|
| 1 | Capacity | |
| 2 | Control System | |
| 3 | Body type | |
| 4 | Temp Controls | |
| 5 | Pressure control | |
| 6 | Dimension | |
| 7 | Electrical Requirement | |
| 8 | Any other | |

**6. Oven**

| S.NO | TECHNICAL SPECIFICATION | DETAILS TO BE FILLED BY BIDDER |
|---|---|---|
| 1 | Temperature range: 20-250 degree Celsius | |
| 2 | Auto PID temperature controlled | |
| 3 | Audio Alarm on temperature deviation | |
| 4 | LCD GRAPICAL DISPLAY | |
| 5 | Timer Disable option | |
| 6 | Fan Timer Inbuilt | |
| 7 | Any Other | |

**7. Incubator**

| S.NO | TECHNICAL SPECIFICATION | DETAILS TO BE FILLED BY BIDDER |
|---|---|---|
| 1 | Speed from 20 RPM to 250 RPM | |
| 2 | Digital display of Speed | |
| 3 | Shaking amplitude 25 mm | |
| 4 | Automatic restart in case of power failure. | |
| 5 | Digital Display Temperature Controller. | |
| 6 | fitted with air circulation fan | |
| 7 | Any other | |

**8. Electronic Balance**

| S.NO | TECHNICAL SPECIFICATION | DETAILS TO BE FILLED BY BIDDER |
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|---|---|---|
| 1 | Readability | |
| 2 | Capacity | |
| 3 | Pan Size | |
| 4 | Body Dimensions | |
| 5 | Weight (kg) approx | |
| 6 | Power Requirement | |
| 7 | Touch-key Calibration | |
| 8 | Any other | |

**9. Vortex**

| S.NO | TECHNICAL SPECIFICATION | DETAILS TO BE FILLED BY BIDDER |
|---|---|---|
| 1 | Body type | |
| 2 | Speed regulator | |
| 3 | Switch for constant on and touch on. | |
| 4 | Facility for shaking tubes, flasks and microcentrifuge tubes | |
| 5 | Maximum speed | |
| 6 | Any other | |

**10. Liquid Nitrogen Container**

| S.NO | TECHNICAL SPECIFICATION | DETAILS TO BE FILLED BY BIDDER |
|---|---|---|
| 1 | Capacity | |
| 2 | Container details | |
| 3 | Any other | |

Date: (Signature of the Offerer)

OFFICE SEAL

(This format shall be sent in a separate sealed cover super scribing - **"TECHNICALBID FOR EQUIPMENT_____ for ref No DBT/BT/553/NE/U-Excel/2016/Equipment/01**)

**PROFORMA FOR SUBMISSION OF FINANCIAL BID (FB)**

From
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To,
Prof. Sanjib Kumar Panda
Principal Investigator, DBT U-Excel Project
Department of Life science and Bioinformatics,
Assam University, Silchar-788011, India.

Having read and understood the Technical bid, I am / We are furnishing the desiredinformation and submitting our Technical Bid duly signed by our Authorized person.Now we hereby submit (in separate sealed cover) our Financial Bid for the purchase ofequipments.

**Please fill up for the items mentioned separately, whichever is applicable:**

| S.NO | SPECIFICATION ITEMS | DETAILS TO BE FILLED BY BIDDER |
|---|---|---|
| 1 | Name of the equipment with model no. etc | Price in /$/Other currency whichever is applicable (Please mention separately the price of the items, accessories, insurance, etc. under separate heads) |
| 2 | Applicable taxes | To be included |
| 3 | CIF of FOR Silchar | To be included |
| 4 | Special Offer/ Discount | To be included |
| 5 | Grand Total | Price in INR/$/Other currency whichever is applicable |
| 6 | Terms and condition | As applicable |
| 7 | Warranty and after sales service | As applicable |
| 8 | Banking Details (For foreign items) | To be included |

Date: (Signature of the Offerer)
OFFICE SEAL

(This format shall be sent in a separate sealed cover super scribing - **"FINANCIAL BID FOR EQUIPMENTS _____for ref No DBT/BT/553/NE/U-Excel/2016/Equipment/01**)