Date: 02 March 2021

Minutes of the 8th meeting of the TEQIP-III Board of Governors (BoG) MBM Engineering College, Jodhpur.

Meeting Date: 01st March 2021
Meeting Time: 11:30 (Monday)
Venue of Meeting: Conference hall, Dean Office
MBM Engineering College, Jodhpur.

In Chair: ***Dr. D. G. M. Purohit (Chairman).***

List of Member's Present:

1 Prof. Sunil Sharma, Dean, MBM Engineering College
2 Dr. D S Hooda, Member, AICTE Nominee, BoG Member(Through Google meet).
3 Prof. Ravi Saxena, Coordinator, TEQIP-III & BoG Member
4 Prof. Dinesh Shring, BoG Member

Special Invitee

1. Prof. A.K. Verma (EAP Coordinator & Nodal Officer Finance, TEQIP-III)

Leave of absence accorded:

1. Dr. J. L. Kankariya, BoG Member (Through Google meet).
2. Dr. K. L. Sharma, BoG Member.
3. Dr. K. R. Chowdhary, BoG Member.
4. State Nominee (Not nominated by the State Govt.).
5. Dr. Anil Vyas, (Nodal Officer Procurement)

Agenda No.	Item
Agenda 1.	To confirm the minutes of the previous BoG meeting held on 14th Dec 2020 previous meeting.
Discussion and Resolution	It was resolved to approve the minutes.

Date: 02 March 2021

Agenda 2.	To report about the action taken on decisions taken in previous meeting.
Discussion and Resolution	Approved the action taken report
Agenda Item 3:	Expenditure incurred year wise under TEQIP-III
Discussion and Resolution	It was resolved to approve the expenditure incurred under TEQIP-III from Start the project to 20 Feb 2020.
Agenda Item 4:	Proposals received from various Department for procurement for consideration.
Discussion and Resolution	It was resolve to approved the proposals submitted by Civil, Mechanical, TPO, Institution Level Departments of procurements. (Appendix-I)
Agenda Item No. 5	M/s Engineering Academy given work for the taking classes of the Gate examination but after October he is not taken any classes and in the month of the December he is provided the pre-recorded lectures through their Nimbus Learning Application and asking for the payment for the bill. The matter was placed before the meeting of the Head of the Department. And it was resolved to provide to impose the penalty on M/s Engineering Academy. Now the how much penalty is too imposed before the BoG to decide.
Discussion and Resolution	It was resolved as M/s Engineering Academy has not conducted 50hrs crash course classes and provided pre-recorded lectures to students without taking approval from Dean. The firm has breached the contract and hence it was resolved not to make any balance payment if any to the firm M/S Engineering Academy.
Agenda Item No. 6	Some Department submitted bill in TEQIP office without any financial sanctions.
Discussion and Resolution	It was resolved to make payments as per rules and without prior approval no payment shall be made.
Agenda Item No. 7	On 23 Feb 2021 Head Department of Electrical Engineering written by hand writing placed the date of 28 Feb 2021 surrender amount is near above 8.00Lakh.who is responsible for that.
Discussion and Resolution	It was resolved to obtain explanation from Head, Department of Electrical Engineering for surrendering the amount Rs.7,30,000 on 23/02/2021.
Agenda Item No. 8	TEQIP Office Staff Increment and arrear is last Two Year pending.
Discussion and Resolution	It was resolved that a send letter to Secretary Higher education/Technical education for awarded of Increment.
Agenda Item No. 9	Without any financial sanction and permission some faculty conducted online Future skill training under TEQIP and submitted the bill.
Discussion and Resolution	It was resolved to make payment as per rules.

The meeting ends with the words of thanks to chair.

Dr. D G M Purohit
(Chairman)

Chairman
BoG - TEQIP- III
M.B.M. Engineering College,
Jai Narain Vyas University, Jodhpur

Date: 02 March 2021

(Appendix-I)
Department of Civil Engineering

Ph : +91-291-2512710
+91- 8209036225
Department of Civil Engineering
Faculty of Engineering & Architecture, M.B.M. Engineering College
Jai Narain Vyas University, Jodhpur-342011

No: CSE/21/144 Date: 22/2/21

To,
TEQIP Coordinator,
MBM Engineering College
Faculty of Engineering and Architecture
J.N.V. University
JODHPUR-342011

TEQIP-III 278 22/2/21 MBM ENGG. COLLEGE, JODHPUR

Sub: Package details of purchasing under TEQIP-III

Dear Sir,

Department of Civil Engineering requires following items as listed below. We request you to give financial sanction (if possible). Information regarding Specifications of items and packages are attached, as required to initiate the procurement process on PMSS portal to invite the tenders as per NPIU/TEQIP-III.

S. No.	Package Name	Est. Cost (INR)	Specifications
1	**Electronic Total Station :(Quantity-02)**	490000.00	Annexure-1
2	**Automatic optical Level:(Quantity -25)**	495000.00	Annexure-2
3	**UV-Visible Spectrophotometer: (Quantity-1)**	300000.00	Annexure-3
4	**Gas Chromatograph:(Quantity-01)**	495000.00	Annexure-4
5	**COD (chemical oxygen demand) Analyzer (Quantity : 2)**	497000.00	Annexure-5
6	**Total Organic Carbon (TOC) Analyzer: (Quantity-1)**	498000.00	Annexure-6
7	~~Continuous Ambient Particulate Monitoring (Quantity-1)~~	~~500000.00~~	~~Annexure-7~~
	Total Amount:	**2775000.00**	

Thanking you

With Regards

Head of Civil Engineering

Department of Civil Engineering
Faculty of Engineering & Architecture
M.B.M. Engineering College
Jai Narain Vyas University
JODHPUR

Encl: Details & specifications attached as annexures (1to 7)

Date: 02 March 2021

Annexure-1

Electronic Total Station: Quantity -2

Proposed tentative specifications:

Angle Measurement Accuracy or less	5 second or lower
Display resolution / Least Count (Minimum)	2 second or lower
Compensator Setting Accuracy (Minimum)	2 second or lower
Distance Measurement with Reflector Prism with Single Prism (Minimum)	3000 meter or higher
Distance Measurement without Reflector Prism	350 meter or higher
Accuracy in Distance Measurement without Reflector Prism upto 250m	<= (4 mm + 2 ppm)
Typical Measurement time or less	2 second or less
Focus Distance	0.0 -2.0 meter
Plummet Type	Laser based
Resolving power	0.0 -3.0
Data storage- Internal Memory	0.25 GB or higher
Operating System	Windows Based/ window CE or better
Auto Power-Off Option	Yes
Battery Operating time (Backup Time) (minimum)	8 hrs or more
Number of Tripod	1 or more
Number of Single prism with Target Plate	2 or more

Annexure-2

Automatic optical Level: Quantity -25

Proposed tentative specifications:

Magnification (in X)	20 or higher
Gas - filled Telescope	No
Objective Lens Aperture	25 or more , millimeter
Field of View	1°15' or more
Minimum Focus Distance from the center of the Instrument	0.3 meter or more
Parallel Plate Micrometer	Without
Accuracy (Standard Deviation per 1 km double - run levelling), without Micrometer	2.5 millimeter or lower
Circular Vial (Bubble) Accuracy (per 2 mm)	6 minute or more
Graduation on Horizontal Scale / Circle	360 degree
"Graduation Interval (Better Than or Equal to)"	1 degree
Compensator	Magnetic - damped Compensator with Automatic compensation
Compensator Setting Accuracy	0.5 second or lower
Accessories inclusive in the scope of supply	Lens Cap, User Manual, Carrying Case,
Maximum Operating Temperature	50 degree Celsius
WARRANTY	1 year

HOD
Department of Civil Engineering
Faculty of Engineering & Architecture
M.B.M. Engineering College
Jai Narain Vyas University
JODHPUR

Date: 02 March 2021

Annexure-3

Spectrophotometer: Quantity-1
Proposed tentative specifications:

Type of Optical System	Single/Double/ Split Beam
Detector Type	Photodiode / PMT/ other
Spectral Bandwidth Type	Variable/ Fixed Bandwidth
Source Wavelength - Minimum	175 or more
Source Wavelength - Maximum	320 or more
Photometric measurement modes	Transmittance, Absorbance, Concentration (Wavelength, time), reflectance etc
Photometric Absorbance (Max) (Abs) (+/-)	0.2-8
Photometric Absorbance Accuracy (Max) (+/-)	0.001-0.5
Diffraction Grating (lines/mm)	600 or more
Wavelength Setting And Scanning	Automatic/ manual
Photometric Transmittance Accuracy (Max) (+/-)	0.0- 0.5
Stray Light Correction	Automatic
Baseline Correction	Automatic
Display	In-built display/ through PC
Suitable software for connecting PC & Printer	Yes
Number of Cuvettes supplied-inclusive in the scope of supply	10
Power Supply	230 V ± 10, 50 Hz
Onsite Warranty	1 year

HEAD
Department of Civil Engineering
Faculty of Engineering & Architecture
M.B.M. Engineering College
Jai Narain Vyas University
JODHPUR

Date: 02 March 2021

Annexure-4

Gas Chromatograph: Quantity: 1
Proposed tentative specifications:

"GC Detectors inclusive in the scope of supply	Flame Ionization Detector (FID)
"Number of FID in the System - inclusive in the scope of Supply (Minimum)	1
Number of Inlets GC can Simultaneously Support (minimum)	2
Number of Detectors (Ports) GC can Simultaneously Support (minimum)	2
"Number of Packed Columns provided in GC - inclusive in the scope of Supply (minimum)	1
"GC Detector Minimum Detection Level (MDL) "	< 1.4 pg C/s for FID
Maximum Operating Temperature (GC Oven)	upto 450 deg. C or higher
Number of Injection Ports	2 or more
Maximum Injection Port heating Temperature	upto 450 deg. C or higher
Pressure Range	upto100 psi / upto 120psi
Type of Sample Injection Port	Splitless/ split
Modes of Operation	Constant flow
"Software Features (Select Applicable Features only)": **Compatible with Windows 7 or higher version operating system, Seamless integration & control of all the GC parameters, Counters, Chromatographic attributes, Retention Time - Locking module for analysing target compounds in complex matrices**	
Power Supply	230 V ± 10%
Display	Through PC (PC is not part of supply)
Provision to split the sample from single injection to two different detectors and get results for two detectors simultaneously	Yes
"Other Accessories inclusive in the scope of supply (Accessories which are part of supply)" : **Gas purification panel for all Gases with moisture trap, Hydrocarbon trap & Oxygen trap, Tool Kit x 1 no., User / Technical / Maintenance Manual**	
Operating Humidity (RH) (%) at 40 degree C	90 or higher percent
Installation & Commissioning	Inclusive in the scope of supply
Warranty on equipment	1 year
onsite training	yes

Annexure-5

COD(chemical oxygen demand) Analyzer (Quantity : 2)
Proposed tentative specifications:

Feature	Should have facility to recheck/calibrate the temperature, Should include safety shield and must be CE (Conformity environmental marking European economic area) approved, Temperature setting should be available in Degree C
facility for holding minimum vials	12
Reagents	Composition of digestion solution (with mercuric sulphate) and sulphuric acid reagent to be provided for low, medium and high range of COD
Concentrations with accuracy	2 to 3 Percent
Features	Medium Range: 0 to 1500 mg/L
Power Supply(AC)	220-250 Volt
Accessories	Operation Manual, Vials two sets with all reagents,

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Faculty of Engineering
M.B.M. Engineering College
Jai Narain Vyas University
JODHPUR

Date: 02 March 2021

Annexure-6

Total Organic Carbon (TOC) Analyzer: (Quantity-1)
Proposed tentative specifications:

Application	Liquid Sample
Showing Data	Total Organic Carbon
Method	Wet chemical oxidation by UV
Operating Modes	Standalone (Windows CE), PC-controlled, or LAN/LIMS network connectivity
Zero drift	+/- 2%
Ambient temperature	40 degree Celsius
Frequency	50 Hertz
Response Time, minute	< 15
Output	60 Watt
Accuracy error	+/- 5%
Detect range, g/L (Minimum)	2800
Warranty Extension in case of Breakdown for more than 30 days due to Manufacturing Defects/Faulty Spares	Yes
Warranty from date of installation (System & all other parts).	1 yr

HEAD
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Faculty of Engineering & Architecture
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JODHPUR

Date: 02 March 2021

Ph : +91-291-2512710
+91- 8209036225
Department of Civil Engineering
Faculty of Engineering & Architecture, M.B.M. Engineering College
Jai Narain Vyas University, Jodhpur-342011

No: JNVU/FE/civil/149 Date: 26-2-2021

TEQIP-III No. 297 Date 1/3/21 M.B.M. ENGG. COLLEGE, JODHPUR

To,
TEQIP Coordinator,
MBM Engineering College
Faculty of Engineering and Architecture
J.N.V. University
JODHPUR-342011

Sub: Package details of purchasing under TEQIP-III

Dear Sir,

Department of Civil Engineering requires following items as listed below. We request you to give financial sanction (if possible). Information regarding Specifications of items and packages are attached, as required to initiate the procurement process on PMSS portal to invite the tenders as per NPIU/TEQIP-III.

S. No.	Package Name	Est. Cost (INR)	Specifications
1	**Air Conditioner (Split) :(Quantity-15)** **For Smart class room/ Labs**	495000.00	Annexure

Thanking you

With Regards

26/2/2021

Head of Civil Engineering

HEAD
Department of Civil Engineering
Faculty of Engineering & Architecture
M.B.M. Engineering College
Jai Narain Vyas University
JODHPUR

Encl: Details & specifications attached as annexures-I

Date: 02 March 2021

Ph : +91-291-2512710
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Department of Civil Engineering
Faculty of Engineering & Architecture, M.B.M. Engineering College
Jai Narain Vyas University, Jodhpur-342011

Annexure-4

1	Item Name	Air Conditioner, Quality : 15
		SPECIFICATIONS OF AIR CONDITIONER: 1. Type: Split, Wall Mounted, Eco-friendly refringent, with remote 2. Star rating: 5 Star (Minimum) 3. Nominal Cooling Capacity: 1.5 ton (+/- 10 %) 4. Coil Material: Copper 5. Technology: Variable speed (Inverter) 6. Warranty: 10 Yr. on compressor 7. Warranty on Machine: 1 yr. 8. Minimum Length of copper pipe & suitable connection: 3 m 9. Installation: With Installation and Commissioning

26/2/2021
HEAD
Department of Civil Engineering
Faculty of Engineering & Architecture
M.B.M. Engineering College
Jai Narain Vyas University
JODHPUR

Date: 02 March 2021

TPO

Training and Placement Cell

MBM Engineering College, Jodhpur, Rajasthan
Website: mbm.ac.in, email:tpocellmbm@gmail.com, Mobile:9414918856

Date 01/03/2021

Proposal for TPO office

TEQIP-III 300 1/3/21

To the coordinator, TEQIP-III
MBM Engineering College, Jodhpur

Dear Sir,

Greetings of the Day!

I request you to kindly consider to procure the following items for TPO office for smooth conduct of the campus placement activities Two executive tables and 8x chairs

1. Furniture for the interview rooms and rest rooms. (Rs 12,000/-)
2. A portable sound system for PPT of companies (Rs 40,000/-)

With the kindest regards

Prof. Arvind Kumar Verma

TPO, MBM

Date: 02 March 2021

Department of Mechanical Engineering

Department of Mechanical Engineering
M.B.M Engineering College,
Faculty of Engineering Jai Narain Vyas University, Jodhpur

JNVU No/Mech/2021/168 Date 7/02/21

TEQIP-III 299 1/3/21 MBM ENGG. COLLEGE, JODHPUR

To,

The Coordinator,
TEQIP III,
MBM Engineering College

Sub: Request for the replacement of items for inviting tenders.

Respected Sir,

In respect to the items approved through BOG and SPIU in the month of December under the item name Pyranometer and Solar PV efficiency measurement system, as these items are not available on GeM portal, we request you for the approval of new items which are also available on GeM.

S No	Previous Package Name	New Package Name	Est Cost
1	Pyranometer	Battery Design Module CKL (University Version) (COMSOL Multiphysics)	1,50,000/-
2	Solar PV efficiency measurement system	Fuel Cell & Electrolyzer Module CKL (University Version) (COMSOL Multiphysics)	1,50,000/-
		Microfluidics Module CKL (University Version) (COMSOL Multiphysics)	1,50,000/-

Kindly find the Package details, Item details, Payment details attached in the file.

I kindly request you to please endorse the same as per rules.

Thank You,

Yours faithfully

Dinesh Shri

Head of Department
Department of Mechanical Engineering

Professor & Head
Mechanical Engineering Department
Faculty of Engineering
J.N.V. University, Jodhpur

Seal with Signature

Date: 02 March 2021

Department of Mechanical Engineering
M.B.M Engineering College,
Faculty of Engineering Jai Narain Vyas University, Jodhpur

No. JNVU/Mech./2021/168 Date: 27/02/21

TEQIP-III 298 1/3/21 M.B.M. ENGG. COLLEGE, JODHPUR

To,

The Coordinator,
TEQIP III,
MBM Engineering College

Sub: Request for the Package details for inviting tenders.

Respected Sir,

For the development for the Lab development in the Department of Mechanical, we hereby submitting the enclosed complete set of package details required to initiate the procurement process on PMSS Portal to invite the tenders as per NPIU/ TEQIP-III.

S No	Package Name	Est Cost
1	POLYSUN Software	8,20,000
2	Fuel cell training system	9,00,000
3	COMSOL Multiphysics CKL (University Version) (COMSOL Multiphysics) (30 users)	4,00,000
4	Porous Media Flow Module CKL (University Version) (COMSOL Multiphysics) (30 users)	1,50,000

Kindly find the Package details, Item details, Vendor details, Payment details attached in the file.

I kindly request you to please endorse the same as per rules.

Thank You,

Yours faithfully

Dinesh Bhati

Head of Department
Department of Mechanical Engineering

Professor & Head
Mechanical Engineering Department
Faculty of Engineering
J.N.V. University, Jodhpur

Seal with Signature

Date: 02 March 2021

Department of Mechanical Engineering

Item Inside Package Details

S No	Field	Detail
1	Item Name	Fuel cell training system
2	Description/ Specification of item	Type of fuel cell PEM, Number of cells 48, Rated Power 1000W, Performance 28.8V @ 35A, H2 Supply valve voltage 12V Purging valve voltage 12V, Blower voltage 12V, Reactants Hydrogen and Air, External temperature 5 to 30ºC Max. stack temperature 65ºC, H2 Pressure 0.45-0.55bar, Hydrogen purity ≧99.995 % dry H2 Humidification self-humidified Cooling Air (integrated cooling fan), Stack weight (with fan & casing) 4000 grams(±100grams) Controller weight 400 grams(±30grams) Dimension 23.3cm x 26.8cm x 12.3cm, Flow rate at max output* 13 L/min, Startup time ≦30S at ambient temperature Efficiency of stack 40% @ 28.8V, Low voltage shut down 24V, Over current shut down 42A, Over temperature shut down 65℃ External power supply** 13V(±1V),8A Power Control Unit- 1KW PWM charge controller Battery 12 V, 26Ah, 2 battery in series Inverter-24 V, 1650 VA inverter
3	Is Training required (Y/N)	Y
4	Is Installation required (Y/N)	Y
5	Quantity	1
6	Est. Cost Per Unit	9,00,000/-
7	Estimated Cost	9,00,000/-

27/2/21
Professor & Head
Mechanical Engineering Department
Faculty of Engineering
J.N.V. University, Jodhpur
Seal & Signature

Date: 02 March 2021

Department of Mechanical Engineering

Package Requirements

S no.	Field	Details
1	**Package Name**	Fuel cell training system
2	**Total Items In Package**	1
3	**Justification for Package**	For the development in renewable energy lab
4	**Is Proprietary (Y/N)**	Y
5	**Quotation Validity 90 days.**	45 Days
6	**Is Training (Y/N)**	Y
7	**Training Clause**	Suppliers to provide training for 1 day on usage, operation and maintenance
8	**Is Installation (Y/N)**	Y
9	**Testing/ Installation Clause**	1. Installation and commissioning of must be done by personnel onsite.
10	**Warranty (Min 6 Month)**	12 month
11	AMC	N
12	**Installation Requirements**	
13	**Question:**	Delivery of the item shall be within 2 to 4 weeks from the date of order placed.
14	**Non Responsive Value**	N/A

27/2/21

Professor & Head & Signature
Mechanical Engineering Department
Faculty of Engineering
J.N.V. University, Jodhpur

Date: 02 March 2021

Department of Mechanical Engineering

Item Inside Package Details

S No	Field	Detail
1	Item Name	POLYSUN Software
2	Description/ Specification of item	Polysun: Solar System Simulation Software for - Solar thermal - Solar photovoltaic - PVT (Photovoltaic -Thermal) - Heat pumps - Geothermal - LAN based Network license - License Validity- 4 years - AMC, updates, service packs, new version upgrade FREE OF COST for 4 years
3	Is Training required (Y/N)	Y
4	Is Installation required (Y/N)	Y
5	Quantity	10 Users
6	Est. Cost Per Unit	8,20,000/-
7	Estimated Cost	8,20,000/-

27/2/21

Seal & Signature
Professor & Head
Mechanical Engineering Department
Faculty of Engineering
J.N.V. University, Jodhpur

Date: 02 March 2021

Department of Mechanical Engineering

Package Requirements

S no.	Field	Details
1	**Package Name**	POLYSUN Software
2	**Total Items in Package**	1
3	**Justification for Package**	Software will be purchage to improve sofware skill of students. This will also help to research scholar as well as teachers for their research work. It will also help in developing the computer lab in our department.
4	**Is Proprietary (Y/N)**	Y
5	**Quotation Validity 90 days.**	45 Days
6	**Is Training (Y/N)**	Y
7	**Training Clause**	Suppliers to provide training for 1 week on usage, operation and maintenance of software at free of cost and subsequent training on every upgrade.
8	**Is Installation (Y/N)**	Y
9	**Testing/ Installation Clause**	1. Installation and commissioning of software must be done by personnel onsite.
10	**Warranty (Min 6 Month)**	12 month
11	**AMC**	Y
12	**Installation Requirements**	
13	**Question:**	Delivery of the item shall be within 2 to 4 weeks from the date of order placed.
14	**Non Responsive Value**	N/A

23/2/21
Seal & Signature
Professor & Head
Mechanical Engineering Department
Faculty of Engineering
J.N.V. University, Jodhpur

Date: 02 March 2021

Institution Level

Department Name	Lab Name	Item Name	Description/ Specification of item	Quantity	Est. Cost Per Unit	Estimated Cost	Justification	Procurement Method Gem/ CPP	BIS Approved Yes/ No
Institution Level		Green Board 8X4	Performance Parameters Purpose of writing board Writing Material of Board Ceramic Steel Material of Frame Anodized extruded Aluminium alloy hollow section of designation 63400 conforming to IS: 1285 Material of Back Cover Galvanized steel sheets conforming to IS:277 Thickness of Back Cover 0.25 millimeter Thickness and Material of back support (conforming to IS:12406) 9 millimeter Top surface coating thickness of sheet in mm 0.095 millimeter % Gloss at 60 deg head (min.) 5% green, blue black colours Surface suitable for writing with chalk for colour & black board Back surface coating thickness of sheet (min) 0.03 millimeter Thickness and material of top steel sheet Having Viterious Enamelled coating on both side 0.3 millimeter Excellent Erasability without leaving impression Yes Warranty in years 1 Dimensional Parameters Dimensions of the Board in feet (width x height) 4 x 8 Dimensions of Boards in mm x mm (width x height) 1200 X 2400 Wall thickness of Anodized Aluminium Frame (Min) in mm 1.2 millimeter Colour of Board Green Frame Width in mm 20 millimeter Additional Items One Magnetic Type Eraser No 4 nos dry erasible ink markers(Green blue red/ Black) No one set of 6 Pcs paper holding magnets for white board only No one box of 50 nos non dust chalks sticks No one dry wipe duster 1 nos spare sponges for colour and black board No Reports Availability of Type Test Reports of the product from Central Govt NABL/ILAC accredited Lab showing compliance to the specification No Test Report No NA	100	3200	320000	For Teaching Classrooms	Gem	

Department Name	Lab Name	Item Name	Description/ Specification of item	Quantity	Est. Cost Per Unit	Estimated Cost	Justification	Procurement Method Gem/ CPP
Institution Level		White Board 8X4	Performance Parameters Purpose of writing board Writing Material of Board Ceramic Steel Material of Frame Anodized extruded Aluminium alloy hollow section of designation 63400 conforming to IS: 1285 Material of Back Cover Galvanized steel sheets conforming to IS:277 Thickness of Back Cover 0.25 millimeter Thickness and Material of back support (conforming to IS:12406) 9.8 millimeter Top surface coating thickness of sheet in mm 0.095 millimeter % Gloss at 60 deg head (min.) 80% for white colour only Surface suitable for writing with Dry marker ink for white board only Back surface coating thickness of sheet (min) 1.1 millimeter Thickness and material of top steel sheet Having Viterious Enamelled coating on both side 0.3 millimeter Excellent Erasability without leaving impression Yes Dimensional Parameters Dimensions of the Board in feet (width x height) 4 x 8 Dimensions of Boards in mm x mm (width x height) 1200 X 2400 Wall thickness of Anodized Aluminium Frame (Min) in mm 1.2 millimeter Colour of Board White Frame Width in mm 20 millimeter Reports Availability of Type Test Reports of the product from Central Govt/NABL/ILAC accredited Lab showing compliance to the specification No Test Report No N/A Test Report Date N/A Name of the Lab N/A Complete Address of the Lab N/A copy of test reports to be furnished to the buyer on demand at the time of supplies (Applicable if availability of test report indicated as YES, otherwise put NA) NA	100	3200	320000	For Teaching Classrooms	Gem

Date: 02 March 2021

Department Name	Lab Name	Item Name	Description/ Specification of Item	Quantity	Est. Cost Per Unit	Estimated Cost	Justification	Procurement Method Gem/ CPP
Institution Level		Display Board	Multi-layer wooden structure, internal external finish, walnut colour. Thick solid walnut finish wood profiles and frame. Solid wood frame, brass safety lock with no. 2 keys, special brass hinges, 3 mm shatter-proof plexiglas doors. Multi-layer wood backing covered in cork and grey felt. A simple notification is more easily read inside Ravasi noticeboards. Specifically designed to protect and highlight notices with a modern and elegant design avoiding sheets deteriorating in bad weather or removed due to vandalism. There are 5 sizes available according to the number of A4 sheets they can hold. They are also available in aluminium or wood versions (Classic range) with leaf opening or sliding according to the dimensions, pharmacy noticeboards with internal light (to indicate the on-duty pharmacy) and key-holder boards with specific internal hooks. In addition, like all Ravasi products, even the noticeboards can be customised according to clients' needs (gas spring door, cork or fabric backing, weatherproof version). Combining the elegance of a classic style with the sizes necessary for modern correspondence. The Ravasi "Classic Range" merges these two needs with four formats of mail boxes. They can all hold magazines and are made of the best materials to enhance all period and prestigious buildings. The units can be equipped with containers and notice-boards. Free-standing options are also available. The manufacturing system is very important because it enables the building of very sturdy units even if they are made up of many mail boxes. The wide range of finishes - from classic walnut to RAL colour coating - complete the units with an exclusive style.	100	3200	320000	For Display Notifications	Gem

Department Name	Lab Name	Item Name	Description/ Specification of Item	Quantity	Est. Cost Per Unit	Estimated Cost
Institution Level		DSLR Camera	Type Single-lens reflex digital camera Lens mount Nikon F mount (with AF contacts) Effective angle of view Approx. 1.5x lens focal length (35 mm format equivalent); Nikon DX format Effective pixels Effective pixels 24.2 million Image sensor Image sensor 23.2 x 15.4 mm CMOS sensor Total pixels 24.7 million Dust-reduction System Image sensor cleaning Image Dust Off reference data (optional Capture NX 2 software required) Storage Image size (pixels) 6,016 x 4,000 [L]; 4,512 x 3,000 [M]; 3,008 x 2,000 [S] File format NEF (RAW): 12 bit, compressed JPEG: JPEG-Baseline compliant with fine (approx. 1:4), normal (approx. 1:8) or basic (approx. 1:16) compression NEF (RAW)+JPEG: Single photograph recorded in both NEF (RAW) and JPEG formats Picture Control System Standard, Neutral, Vivid, Monochrome, Portrait, Landscape; selected Picture Control can be modified Media SD (Secure Digital) and UHS-I compliant SDHC and SDXC memory cards File system DCF (Design Rule for Camera File System) 2.0; DPOF (Digital Print Order Format); Exif (Exchangeable Image File Format for	2	40000	80000

Date: 02 March 2021

Department Name	Lab Name	Item Name	Description/ Specification of Item	Quantity	Est. Cost Per Unit	Estimated Cost
Institution Level		Vacuum Cleaner	FILTER Filter Dust class as per EN 779:2012 Classification G4 Filter Area(square meter) 1.3 Filter clean operation Auto,Manual PERFORMANCE Vacuume level 290 millibar Airflow rate (ltrs/Sec) 102 Suction Hose length 3 meter Flow Nozzle size 400 millimeter Power Supply 230 + 10 % VAC, Single Phase, 50 +/- 2 % HZ Rated input power during operation 3 kiloWatt Power Cord Length 10 meter MOTOR Number of Motors 2 Power of Each Motors 1500 Watt RPM 5550 FEATURES Types of Cleaning operation Dry Heavy Duty Cleaning Provision Pneumatic Tool Running Automatically With Vacuum Yes Pneumatic tools Running Power 2000 Watt Provision Power Tool Running Automatically with Vacuum Yes Trouble free wet and dry pickup without having to stop to change filters dry mode to wet mode No Storage facility and integrated accessories holder for tools Yes Start and Stop auto switch on/off power tool Yes Integral auto on-off System for pneumatic and electric tools Yes General Details Overall Dimension (LXWXH) NA Net Weight 37 kilogram Material Of the Body & Container Stainless Steel	2	15000	30000

Department Name	Lab Name	Item Name	Description/ Specification of Item	Quantity	Est. Cost Per Unit	Estimated Cost
Institution Level		Executive Chair	PATTERNS Pedestal Base Chrome finish with 5 wheels Arm Material steel covered with polyurethane seat material PU Foam Covered With pure leatherite Density of PU foam used in seat KG per Cu Meter (+/- 3) 50 Density of PU foam used in backrest in KG per Cu Meter (+/- 3) 50 Material of Fabric Back Cover / Material for Backrest Leatherite Material of Fabric of Seat Cover leatherite GSM/Thickness of fabric ±5%(Gram/Square meter) 250 gram GENERAL Chair Type Auto balance mechanism Tilt Tension Adjustment Yes Height Adjustment ± 5(mm) up to 120 mm Arm With Type of backrest support backrest symmetrical lumber support Arm Type Fixed Colour of Fabric for Seat and Backrest As per Buyer's choice Ergonomic Seat Design No Back type push back Backrest is made of two pcs injection moulded frame Backrest is made of one piece injection moulded frame backrest has separate adjustable headrest No Seat type fixed Seat is curved Yes Locking mechanism Yes Type of locking upright locking Number of arm movement NA Lumber support integrated DIMENSION Overall Chair Height ±15mm 1125 Backrest Height ±15mm 650 millimeter Backrest Width ±10mm 480 millimeter Seat Height ±15 mm 480	4	30000	120000

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Department Name	Lab Name	Item Name	Description/ Specification of Item	Quantity	Est. Cost Per Unit	Estimated Cost
Institution Level		Air & Water Pressure Pump	Physical Characteristics Application Indoor (within premises) Type of High Pressure Washer Cold Water High Pressure Power Supply Electrical Electrical Cable (m) 5 Working pressure (bar) 160-170 Hose Length (m) 10 Pump (rpm) 1420 Max inlet temperature (°C) [illegible] Min feed pressure (bar) 0 Flow rate (l/h) [illegible] Phase Single phase Whether cold water machine is to be used ? YES Motor rating (KW) [illegible] Fuel Tank for Burner (ltr) in case of hot water machine 0 Content detergent tank (lt) [illegible] Spray lance (mm) [illegible] Spray gun standard YES Steam temperature °C NA Hot water output temperature °C NA Burner Performance (KW) NA Type of protection IPX5 Wheels Solid Rubber Material of Chassis Mild Steel as per IS:2062 (Grade A) Material of Body Polypropylene suction height from water source (Meter) 0.5 Pistons Stainless Steel Number of pistons 3 Automatic pressure cut off YES Wands	[illegible]	25000	[illegible]

Institution Level	Smart Board	Technology: TFT LCD with DLED Backlit Display Size (diagonal): 65" Brightness: 400cd/m2 Aspect Ratio: 16:09 Resolution: 3840 x 2160 4K Ultra HD View Angle: 1780 Input Ports: HDMI x 3; VGA x 1; Display Port x 1 : Audio x 1 ; CVBS (AV) ; RS 232 x 1; PC Slot x 2; Slot In For PC Built-in x 1; Wi-Fi Module Slot Built-in x1; or more USB: 3.0 Type A x 3; 2.0 Type A x 3 2.0 Type B (For Touch) x 2 Writing mode: finger, writing pen or any Non-transparent object. Speakers: front facing16W x 2 or higher Touch: Type: Should be IR Recognition; Touch Resolution: 32767 x 32767 or higher Touch Point : 20 Points or higher Writing: 10 Points or higher Response Time: < 10ms or higher Supports: Windows 10/ Windows 8 / Windows 7/ Linux/ MAC iOS / Android Embedded Player CPU Inbuilt: Android Version: 6.0 or higher CPU: ARM Quad Core Cortex A53 1.2G Hz or higher	10	125000	1250000