

Annexure 6 Procurement Plan

| S No. | Package name | Item category (goods/works/services) | Item sub category (equipment/books & LR/Furniture etc) | Is Proprietary (yes/no) | Through DGS&D? (yes/ no) | Through GEM (yes/no) | Estimated Financial Sanction date | Proc. Method | Item Name | Item description/ Specification | Item quantity | Item estimated cost per unit (in Rs) | Total estimated cost (in Rs) | Justification |
|-------|-----------------------|--------------------------------------|--|-------------------------|--------------------------|----------------------|-----------------------------------|----------------------|--|---|---------------|--------------------------------------|------------------------------|--|
| 1 | Procurement/TEQIPII/1 | Goods | Equipment | no | no | yes | Sept. 2018 | Directly through Gem | Multifunction Printer | Multifunction Printer as per quarter 4 submitted | 1 | 20000 | 20000 | R&D Surinder Singh Bhinder |
| 2 | Procurement/TEQIPII/2 | Goods | Equipment | no | no | no | Sept., 2018 | Shopping | Muffle furnace with heating as well as cooling with inert atmosphere | Muffle furnace (Max Temp. 1100 °C), Casing made of thick Mild steel sheet and welded where ever required with plain heat resistant paint. The furnace should be insulated with ceramic Fiber Blanket of High density for better insulation. The element should be placed in open grooved refractory. The elements should be made of Kanthal AF/wire of best quality. The furnace should be equipped with PID programmed controller with different ramp rates for heating as well as cooling along with nitrogen inert atmosphere. Furnace should be supplied with nitrogen cylinder and other essential requirements. | 2 | 1,00,000/- | 2,00,000/- | R&D Surinder Singh Bhinder Sushil Kansal |
| 3 | Procurement/TEQIPII/3 | Goods | Equipment | no | no | yes | Sept., 2018 | Directly through Gem | Multi position stirrers with heating | Multi Position Stirrers MHPS 5P with heating multi position stirrer with slip-less speed regulation, homogenous temperature distribution and brushless motor for maintenance free operation. The closed design allows for easy | 2 | 68,000 | 136,000 | R&D Surinder Singh Bhinder Sushil Kansal |

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|---|-----------------------|-------|-----------|----|----|----|-------------|----------|-----------------------------------|--|---|----------|----------|---|
| | | | | | | | | | | cleaning, safety and protection against spillage. Stirring position 5, seed rpm 1500, display digital, incremental speed from 15 rpm 10, max capacity in lit 2, Temp range from ambient 120c, Dimension W X D X H in mm 562 X 136 X 75, setup plate in mm 456 X 118, pulse mode | | | | |
| 4 | Procurement/TEQIPII/4 | Goods | Equipment | no | no | no | Sept., 2018 | Shopping | Teflon lined autoclave-02 -number | Stainless Steel Autoclave, 25 mL capacity High Quality Teflon Lining. Working Temperature 220 °C | 2 | 32,000 | 32,000 | R&D Sushil Kansal |
| 5 | Procurement/TEQIPII/5 | Goods | Equipment | No | No | No | | Shopping | Camera | <ul style="list-style-type: none"> • 36.3MP Full-frame CMOS sensor (no AA filter) • Shutter speed 30-1/8000 • ISO 64-12,800 (expands to ISO 32-51,200) • Storage: SD/SDHC/SDXC, CompactFlash (UDMA compliant), USB 3.0 • Max 5fps shooting in FX mode, 7fps in DX (with battery grip + EN-EL18 / AA batteries) • File format, JPEG (Exif 2.3, DCF 2.0)RAW (NEF)TIFF (RGB) • Resolutions : 1920 x 1080 (60p, 50p, 30p, 25p, 24p), 1280 x 720 (60p, 50p) • OLED viewfinder information display • 91,000-pixel RGB metering sensor for advanced subject tracking and metering • 'Split screen zoom' display in live view allows horizons/lines to be leveled precisely • 51-point AF system with new 'Group Area AF' mode (inherited from D4S) | 1 | 2,40,000 | 2,40,000 | The camera is required for capturing movement of drops inside liquid extraction column, to understand the hydrodynamics and mechanism occurring inside the drop for liquid liquid extraction in nano fluids Amrit Toor+ Amit Sobti |

Annexure 6 (ii)

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|---|--------------------------------|-------|-----------|----|----|----|--|----------|---|---|---|------------|-----------|--|
| | | | | | | | | | | <ul style="list-style-type: none"> • New 'Flat' Picture Control mode for massive dynamic range capture (video-focused) • Auto ISO available in manual exposure movie mode • Uncompressed HDMI output with simultaneous recording to memory card • Built-in stereo microphone | | | | |
| 6 | Procurement/ TEQIPII I/6 | Goods | Equipment | no | no | no | | Shopping | Overhead Stirrer | Heavy Duty Geared stirrer with PMDC Motor suitable for viscous material, with hollow shaft & propeller in SS 316, Chuck, Digital speed indicator & speed regulator. Stirring volume: 25 litre Speed range: 50-550rpm Stirring shaft length 550 mm Impeller: 4 Cross blade | 2 | 25,000 | 50,000 | R&D Amrit Toor+ Amit Sobti |
| 7 | Procurement/ TEQIPII I/7 | Goods | Equipment | no | no | no | | Shopping | Multi position stirrers with heating | Multi Position Stirrers with heating with slip-less speed regulation, homogenous temperature distribution and brushless motor for maintenance free operation. The closed design should allow easy cleaning, safety and protection against spillage. Number of stirring positions: 5, maximum speed rpm 1500, display digital, incremental speed (from 15 rpm):10, max capacity in litre 2, Temp range from ambient to 120°C, Dimension W x D x H in mm 562 x 136 x 75, setup plate in mm 456 x 118, should have pulse mode. | 1 | 68,000 | 68,000 | R&D Amrit Toor+ Amit Sobti |
| 8 | Procurement/ TEQIPII I/8 | Goods | Equipment | No | No | No | | Shopping | Laptop | 7th gen i7-7700 HQ ,8 GB RAM ,128 GB SSD , 1TB HDD +4GB GTX1050, MSO H& S 2016 W10 Backlit acid green KBD , | 7 | 104,990.00 | 734930.00 | for demonstrat ion of various |

Annexure 6 (iii)

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|----|------------------------|-------|-----------|----|----|-----|--|-----|--|--|---|----------|--|---|
| | | | | | | | | | ANTIGLARE ips 15.6 " ,FHD 2FK57PA (PRICE EXCLUSIVE OF 18%GST)+ MS OFFICE 2012 (LIFETIME) HP EliteBook 840 G4 Notebook PC (ENERGY STAR),7th Generation Intel® Core™ i5 processor or higher, Intel® HD Graphics 620,2.5 GHz,35.56 cm(14) diagonal HD SVA anti-glare slim LED-backlit (1366 x 768),8 GB DDR4-2133 SDRAM (1 x 8 GB),memory and storage:8 GB memory; 1 TB HDD storage; 128 GB SSD storage,Starting at 1.48 kg, along with accessories, Laptop Bag (PRICE EXCLUSIVE OF 18%GST)+ MS OFFICE 2012 (LIFETIME) | | | | simulation and research softwares for BE-MBA students Harjit, Maninder, Jodh Singh, BaljinderSanchitaNidhi | |
| 9 | Procurement/TEQIPII/9 | Goods | Equipment | No | No | Yes | | GeM | Desktop Computer | i7 win 10 pro)(9020mt-GEM website)Processor Generation - 7th Processor - Intel Core i7-7700 (3.6 GHz, 8 MB Cache, 4 Cores) chipset - Intel Q170 Graphics - integrated Type of RAM - DDR 3hard disk 1000GB, RAM speed 2133MHz,win 10 professional | 1 | 70000.00 | 70000.00 | For installing with Texture analyzer equipment, old computer is more than 12 years old. Dr Santanu Basu |
| 10 | Procurement/TEQIPII/10 | Goods | Equipment | No | No | Yes | | GeM | Multifunction Printer (ID 558289) | hp laserjet m1005 mfp (GEM website)Print Speed (A4)- Mono - 10 PPM Print Speed (A4)- Color - 10 PPM Network Capability - Yes Simplex - Yes Paper Size - A4, resolution 1200x600 dpi | 2 | 14700.00 | 29400.00 | Dr. Sanchita Chauhan, DR. Santanu Basu |

Annexure 6 (iv)

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|----|------------------------|-------|-----------|----|----|-----|--|----------|--|--|---|------------|-----------|--|
| | | | | | | | | GeM | Desktop computer | | 2 | 91000.00 | 182000.00 | Dr Sk Agarwal |
| 11 | Procurement/TEQIPII/11 | Goods | Equipment | No | No | Yes | | GeM | Digital pH meter Product Id: 389225 | <ul style="list-style-type: none"> • pH Range - 0.00 to 14.00 pH • Resolution - 0.01 pH • Accuracy - +- 0.05 pH • Modes - pH mV- C • Temperature Compensation Range - 0 to 100 Degree C | 1 | 20,000.00 | 20000.00 | For PG research Prof. Seema Kapoor |
| 12 | Procurement/TEQIPII/12 | Goods | Equipment | No | No | Yes | | Shopping | Freeze dryer Lyophilizer | <ol style="list-style-type: none"> 1. Drying chamber size: Approximately 200 mm Height x 150 mm dia or bigger, cylindrical, made of thick gauge stainless steel Lid: See through thick gauge made up of Acrylic/Perspex Ports: Minimum 6-port SS drum drying manifold with quick seal valves Cold trap: made of thick gauge stainless steel, transparent front panel (visible) 2. Condensing coils made of Copper bonded to outside of condenser with heavy insulation. 3. Cold trap temperature: -40°C or lower 4. Separate Vacuum Pump: 2 stage direct drive, 100 liters per minute. 5. Vacuum Indication: Digital Vacuum Level: Upto 10⁻³ Torr. 6. Operating Voltage: 220-240 V, 50 Hz. 7. Instrumentation: Digital Temperature Indicator cum controller with digital display 8. PT 100 as temperature sensor, 1°C resolution. 9. Controls: Refrigeration on/off, Vacuum on/off. 10. Built in CFC free system 11. Facility for water drain. | 1 | 400,000.00 | 400000.00 | Prof. Anupama Sharma and DR. Gaurav Rattan Freeze drying |

Annexure 6 (v)

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|-----|---------------------------------|-------|-----------|----|----|-----|----------------|----------|---|--|---|----------|----------|---|
| 13 | Procurement/ TEQIPII I/13 | Goods | Equipment | no | no | no | Sept., 2018 | shopping | Thermo Scientific Orion Ion Plus Combined Plastic Liquid membrane Calcium Ion Selective Electrode along with Reference fill solution 60 ml, with BNC Connection | Calcium Ion Selective Electrode along with Reference fill solution 60 ml, with BNC Connection (9720BNWP) Measurement Range: 5×10^{-7} to 1.0 M Temperature Range: 0 to 40°C | 1 | 93580 | 93580 | R&D (Seema Kapoor) |
| 14 | Procurement/ TEQIPII I/14 | Goods | Equipment | no | no | no | Sept., 2018 | shopping | NIST Traceable Calcium Ion Standard | 0.1M 475 ml (922006) | 1 | 12520 | 12520 | R&D (Seema Kapoor) |
| 15. | Procurement/ TEQIPII I/15 | Goods | Equipment | no | no | no | Sept., 2018 | shopping | ISA for Calcium Ion Selective Electrode | 475 ml (932011) | 1 | 12000 | 12000 | R&D (Seema Kapoor) |
| 16. | Procurement/ TEQIPII I/16 | Goods | Equipment | No | No | Yes | | GeM | Desktop Computer | dell i7 win 10 pro- (DESKTOP DELL OPTIPLEX 7050 MT- CORE I7-7700 (Dell) -GEM website) Processor Generation - 7 th Gen Processor Intel Core i7-7700 (3.6 GHz, 8 MB Cache, 4 Cores) chipset - Intel Q270 Graphics - Dedicated/Discrete – 4GB Type of RAM - DDR 4 | 1 | 99000.00 | 99000.00 | For using various Mathematical and Simulation softwares for the purpose of Masters/Doctoral Programs. Prof. |

Annexure 6 (vi)

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|-----|--------------------------------|-------|----------------------------------|----|----|----|--|----------|-----------------------------|--|---|-------|-------|--|------------------|
| | | | | | | | | | | RAM Size – 32GB hard disk 1000GB, RAM speed 2400MHz, win 10 professional. | | | | | Urvashi Gupta |
| 17. | Procurement/ TEQIPII /17 | Goods | Glassware/ Minor equipment | No | No | No | | Shopping | Fixed Volume pippette | Sigma Aldrich | 1 | 15000 | 15000 | | Common |

Learning Resources

| | | | | | | | | | | | | | | | |
|-----|-----------------------------|--------------|------------------------------------|-----|----|----|--|----------|--|--|---|-----------|------------|--|--------------------------------|
| 18 | Procurement/ TEQIPIII/18 | Goods | Books and learning resources | No | No | No | | Shopping | Harvard Business Review | one year all access journal subscription | 1 | 7000.00 | 7000.00 | for BE-MBA students and faculty reference | Ms. Harjit and Ms. Nidhi |
| 19 | Procurement/ TEQIPIII/19 | Softw are | Books and learning resources | Yes | No | No | | Shopping | Software Mathema tica | Multiple users/ Version 11/ Wolfram | 1 | 100000.00 | 100000.00 | Required for UG/ PG and doctoral students | Prof. Urvashi Gupta |
| 20 | Procurement/ TEQIPIII/20 | Goods | Books and learning resources | No | No | No | | Shopping | Simulatio n games | Rootbear Games for supply chain management | 1 | 5000.00 | 5000.00 | Management games required for UG students | Nidhi |
| 21. | Procurement/ TEQIPIII/21 | Goods | Books and learning resources | No | No | No | | Shopping | Excelab | Excel software | 1 | 26000.00 | 26000.00 | | Prof. Urvashi Gupta |
| 22 | Procurement/ TEQIPIII/22 | Goods | Software | Yes | No | No | | Shopping | Texture Analysis software | To be Purchsed from Stable Microsystems (UK), Proprietary item | 1 | 50000.00 | 50000.00 | For updated version of software for texture analyzer machine | DR. Santanu Basu |
| 23 | Procurement/ TEQIPIII/23 | Goods | Software | Yes | No | No | | Shopping | Maple 2018 Academi cs software | | | | 129,000.00 | | Prof. Sanchita Chauhan |
| 24 | Procurement/ TEQIPIII/24 | | | | | | | | Ebooks | | 1 | 10000.00 | 10000.00 | | |

Annexure 6 (vii)

Minor Civil Works

| | | | | | | | | | | | | | | | |
|----|----------------------------------|-------|-------------------|----|----|-----|--|----------|----------|------------------------------|---|-----------------------|----------|--|-----------|
| 25 | Procurement/ TEQIP III /25 | Goods | Minor Civil Works | No | No | No | | Shopping | Rewiring | Earthing of PURSE Lab | 1 | 40000.00 | 40000.00 | Central Facility lab has sophisticated instruments hence needs proper earthing | Institute |
| 26 | Procurement/ TEQIP III /26 | Goods | Minor Civil Works | No | No | Yes | | Shopping | | Sanitary tanks (02) and pump | 1 | 23000.00+ 25033.00 | 71033.00 | | Institute |

Furniture

| | | | | | | | | | | | | | | | |
|----|---------------------------------------|-------|-----------|----|----|-----|--|-----|-----------------|---|---|----------|----------|----------------|--------|
| 27 | | Goods | Furniture | No | No | yes | | GEM | Computer table | computer table | 2 | 8,920.00 | 17840.00 | | Harjit |
| 28 | TEQIP-III/DR. SSBUICET/ Plan 27 | Goods | Furniture | No | No | yes | | GEM | revolving chair | product Id-496053,Chair type- Central Tilt,Tilt Tension Adjustment - Yes ,Arm type-adjustable ,Arm Material - adjustable arms with pu padding,Backrest Height - 750 mm,(Details attached) | 2 | 8,250.00 | 16500.00 | | Nidhi |
| 29 | TEQIP-III/DR. SSBUICET/ Plan 28 | Goods | Equipment | No | No | Yes | | GeM | Furniture | Stools food tech lab | 1 | 20,000 | 20000.00 | for office use | DCET |