



VIVEKANANDHA
COLLEGE OF ENGINEERING FOR WOMEN
(Autonomous)
Tiruchengode – 637205



NOTICE INVITING TENDER

Under MSME CHAMPIONS Scheme (4116)

Sealed tenders are invited from manufacturers or their authorized distributors/dealers for the procurement of various raw materials/ machine parts/consumables and other related required items under the MSME CHAMPIONS Scheme (4116).

Bidders may submit their quotations in sealed envelopes no later than 3:30 p.m. on 30/09/2026.

The tenders will be opened at 4:00 p.m. on 01/10/2026.

Advt. No.: MSME/4116/01/2026-27 Dated: 22.09.2026


PRINCIPAL

Vivekanandha College of Engineering for Women (VCEW), Namakkal

Dr. KCK. VIJAYAKUMAR M.E., Ph.D

PRINCIPAL,

**VIVEKANANDHA COLLEGE OF
ENGINEERING FOR WOMEN,**

(Autonomous)

ELAYAMPALAYAM - 637 205,

Tiruchengode (Tk.) Namakkal (Dt.)

TAMIL NADU



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TERMS & CONDITIONS

Applicable for Tender under MSME CHAMPIONS Scheme (4116)

1. Eligibility of Bidders:

The bidder(s) should preferably possess an authorized dealer/distributors. Quoted raw materials/ machine parts/consumables should include all integral components. While specific models/specifications are indicative, equivalent or higher configurations from reputed global brands are acceptable.

2. Warranty:

All procured items and add-ons must carry a comprehensive warranty of three **(3) years or should have a minimum of one-year expiry date** from the date of purchase.

3. Compatibility:

The offered items should be 100% compatible. Vendors may visit the concerned mentors, VCEW with prior appointment to ensure compatibility.

4. Quotation Terms:

- Price quoted must be **F.O.R. VCEW**, Tiruchengode, and include all costs: packing, forwarding, supply, installation, testing, and commissioning.
- GST, insurance, and applicable duties must be stated separately.
- Educational discounts, if applicable, should be clearly mentioned.
- For imported goods, custom duty must be mentioned separately.

4.1 All disputes shall be under the jurisdiction of Namakkal Courts, Tamil Nadu.

4.2 The Principal, VCEW reserves the right to accept or reject any or all tenders without assigning any reason if specification are not satisfied.

5. Submission Limit:

Each bidder may submit only one tender.



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6. Validity:

The tender must remain valid for at least 3 months from the deadline for submission.

7. Delivery Period:

The raw materials/ machine parts/consumables must be delivered within 20 days of the issue of Purchase Order.

8. Tender Evaluation:

Tenders will be evaluated based on:

- Proper signatures and documentation
- Compliance with technical specifications and terms
- Item-wise evaluation

9. Documents to Submit:

- Product brochure with make, model, and specifications
- Latest GST return copy
- PAN card copy
- Trade license
- GST Registration Certificate
- Custom/excise duty clearance, if applicable
- MSME/SSI registration certificate (if applicable)
- List of clients (last 3 years) with completion certificates

10. Bid Price Details:

- Quote for each item separately, inclusive of all taxes.
- Corrections must be initialed and dated.
- Prices should be in INR, written in both words and figures.
- Quantity may vary at Purchase Order stage.



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11. Award of Contract:

The contract will be awarded to the most technically compliant and cost-effective bidder.

- The successful bidder with preferred band and lowest rate will be notified and a formal Purchase Order will be issued.

12. Performance Security:

- Must be 5% of the contract value, submitted within 21 days of award.
- Valid for 60 days beyond warranty period.
- Will be refunded after completion of the contract without interest.

13. Payment Terms:

- Full payment will be made after successful delivery, installation, commissioning, and training through PFMS portal as per government norms.
- TDS and GST deductions apply as per Government norms.

14. Warranty Coverage:

- Three (3) years standard warranty must be clearly stated/minimum of one year expiry date should be mentioned for supplying chemicals.
- Coverage includes all supplied items and add-ons.

15. After-Sales Service:

- If damaged it should be replaced with free of cost.

Submit sealed tenders clearly superscripted as:
“Quotation for Tender Advt. No. MSME/4116/01/2026-27 – MSME
CHAMPIONS Scheme (4116)”

To:

The Principal

Vivekanandha College of Engineering for Women (VCEW)

Elayampalayam, Tiruchengode, Namakkal – 637205

Tamil Nadu, India

Tel: +9443734562



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Project –I

Quantity Required – Each 1

S.No.	Item	Specification
1.	Non-invasive optical drip sensor	IR/optical emitter + receiver; external detection at drip chamber
2.	Standard IV drip chamber	Transparent drip chamber; standard IV administration type
3.	IV administration set	Standard disposable IV set with drip chamber
4.	Drip chamber sensor clamp	3D-printed clamp, opaque/light shielded
5.	Tube presence sensor	IR/optical tube presence detection
6.	Low-pressure sensor	Low-pressure medical-fluid compatible sensing; final range after testing
7.	Non-invasive bubble sensor	Optical/ultrasonic external tube sensing
8.	STM32 development board	STM32 Nucleo, F4/G4 class development board
9.	ESP32 development board	Wi-Fi + Bluetooth; DevKit class
10.	Jetson orin Nano	6-core Arm Cortex-A78AE v8.2 64-bit CPU, 1.5MB L2 + 4MB L3 cache, clocked up to 1.7 GHz, 8GB 128-bit LPDDR5
11.	Arduino UNO Q (ABX00173)	Quad Core QRB2210 + STM32U585 MCU
12.	8- in one USB C Multiport Docking Station	
13.	ST Link V2	For STM 8 & STM 32 linker
14.	RTC module	DS3231 or equivalent I2C RTC
15.	MicroSD module	SPI microSD interface
16.	MicroSD cards	16/32 GB industrial/reliable card

17.	Perfboard / prototype PCB	Through-hole/SMD prototyping boards
18.	External ADC	12/16-bit ADC as required by sensor interface
19.	Geared DC motor / compact actuator	Low-speed, controllable actuator for pinch mechanism
20.	H-bridge motor driver	Voltage/current matched to selected actuator
21.	Encoder / Hall / potentiometer	Closed-loop position feedback
22.	Main pinch jaw	POM/Delrin prototype pinch element
23.	Tube guide	Custom IV tube guide/channel
24.	Actuator bracket	Custom bracket for actuator
25.	Return spring	Mechanical return element
26.	Limit switch	Mechanical end-stop detection
27.	Independent emergency actuator	Separate actuator for emergency tube closure
28.	Emergency pinch jaw	Independent tube-closing mechanism
29.	Independent emergency motor driver	Dedicated driver channel
30.	Emergency limit switches	Open/closed confirmation
31.	Emergency push button	Large red latching emergency-stop style switch
32.	OLED display	0.96–1.3 inch, 128x64, I2C
33.	Push buttons	Start/Stop/Menu/Alarm reset
34.	Rotary encoder	Incremental encoder with push switch
35.	Buzzer	5V active buzzer
36.	LED indicators	Red/yellow/green status LEDs
37.	Li-ion/LiPo battery pack	3.7V, approximately 2–5Ah prototype range
38.	Battery protection/BMS	Overcharge/over-discharge/short protection
39.	Battery charger	CC/CV Li-ion charging solution
40.	DC-DC buck/boost	Regulated rails for 12V/5V/3.3V as required
41.	External DC adapter	Prototype-rated regulated adapter

42.	Fuse/polyfuse	Appropriate current rating
43.	Main power switch	Panel-mount rated switch
44.	Wi-Fi antenna	As required by enclosure/ESP32 variant
45.	Router/access point	Dedicated Wi-Fi test network



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Project –II

S.No.	Category	Item	Specification	Qty
1.	Airframe	UAV Frame	S500 or equivalent, 500–550mm, carbon/glass fibre	1
2.	Airframe	Landing Gear	Extended landing legs for payload clearance	1 set
3.	Propulsion	Brushless Motors	2814 or equivalent, 700–900 KV, higher thrust	4
4.	Propulsion	ESCs	40A, BLHeli32 or equivalent	4
5.	Propulsion	Propellers	1045–1147, carbon fibre or nylon balanced	4+2 spare
6.	Flight Controller	Flight Controller	Pixhawk 4, HolyBro Pixhawk 6C, or equivalent	1
7.	Flight Controller	Optical Flow Sensor	Optional stabilization aid — subject to BOM	1
8.	GNSS / Positioning	GNSS Module	M9N or equivalent multi-constellation GNSS, dual compass	1
9.	GNSS / Positioning	RTK GNSS (Optional)	HERE3+ or equivalent RTK — optional upgrade	1
10.	Power System	Power Module	High-accuracy current sensing, 3-12S	1
11.	Power System	LiPo Battery	6S, 6000–8000 mAh, 35C+	1
12.	Power System	Battery Charger	6S balance charger, fast charge capable	1
13.	Air-Quality Sensors	PM1 / PM2.5 / PM10	Plantower PMS7003 or equivalent high-accuracy	1
14.	Air-Quality Sensors	CO2 (NDIR)	SCD41 or equivalent NDIR, high accuracy	1
15.	Air-Quality Sensors	CO Sensor	Industrial electrochemical CO sensor module	1

16.	Air-Quality Sensors	NO2 Sensor	Industrial electrochemical NO2 sensor module	1
17.	Air-Quality Sensors	Temp + Humidity	SHT35 or equivalent high-accuracy calibrated	1
18.	Air-Quality Sensors	Barometric Pressure	MS5611 or equivalent high-resolution	1
19.	Air-Quality Sensors	Sensor Integration Board	Custom or off-shelf multi-sensor integration PCB	1
20.	Air-Sampling System	Mini Sampling Pump	Low-power 5V diaphragm pump for controlled air draw	1
21.	Air-Sampling System	Flow Sensor	Miniature air flow monitoring sensor	1
22.	Air-Sampling System	Sampling Manifold / Chamber	3D-printed or machined sampling chamber	1
23.	Air-Sampling System	Sampling Inlet	Protected inlet positioned away from rotor wash	1
24.	Air-Sampling System	Inline Filter	Particulate pre-filter for gas sensors	1
25.	Agriculture / Vegetation	RGB + NIR Camera System	Dedicated RGB and NIR channels, geo-referenced	1
26.	Agriculture / Vegetation	Camera Gimbal	2-axis stabilized gimbal or precision fixed mount	1
27.	Agriculture / Vegetation	Trigger Synchronization	PWM / GPIO trigger for GPS-synchronized image capture	1
28.	Communication	RC System	2.4GHz FHSS, minimum 8-channel	1 set
29.	Communication	Telemetry Module	915MHz, 500mW, extended range, MAVLink	1 pair
30.	Data Storage	SD Card	64 GB Class 10 UHS-1 for image and sensor logging	1
31.	Safety Hardware	Arm/Disarm LED + Buzzer	Multi-color LED, audible buzzer	1 set
32.	Mounting / Enclosure	Sensor Enclosure	Environmental-protected enclosure for sensor payload	1
33.	Mounting / Enclosure	Payload Bay	Structured payload mounting interface	1
34.	Spare Parts	Motor + Propeller Spares	1 motor spare, 2 propeller pairs	1 set



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Project –III

S.No.	Category	Item	Quantity
1.	Raw Materials	Bamboo	25 kg
2.		PLA	5 kg
3.		PHA/PHB	5 kg
4.	Core Materials	NaOH	2.5 kg
5.		H ₂ O ₂	4 L
6.		Acetic Acid	2 L
7.		Citric Acid	1 kg
8.		Boric Acid	1 kg
9.		Borax	1 kg
10.		HCl	2 L
11.		DI Water	100 L
12.	Solvents	Ethanol	10 L
13.		Isopropyl Alcohol	2 L
14.		Acetone	5 L
15.		Ethyl Acetate	2 L
16.		Methanol	5 L
17.		Glycerol	5 L
18.	Buffer Reagents	KHP	1 kg
19.		KH ₂ PO ₄	1 kg
20.		Na ₂ HPO ₄	1 kg
21.		Laboratory Wipes	-
22.	Others	Cleaning Brushes	-
23.		Sand Paper	-
24.		Bamboo Cutting Blades	-
25.		pH Paper	-
26.		Filter Paper	500 sheets
27.		Muslin Cloth	10 m ²
28.		Disposable Pipettes	300 Nos.
29.		Syringe Filters	200 Nos.
30.		Glass Beakers – 100 mL	20 Nos.
31.		Glass Beakers – 250 mL	20 Nos.
32.		Glass Beakers – 500 mL	20 Nos.
33.		Measuring Cylinder – 50 mL	5 Nos.
34.		Measuring Cylinder – 100 mL	5 Nos.



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Project – IV

S.No.	Category	Item	Preferred Quantity / Pack
1.	Water / General Analytical	Hydrochloric acid, AR	500 mL × 1
2.		Sulphuric acid, AR	500 mL × 1
3.		Nitric acid, AR	500 mL × 1
4.		Sodium hydroxide, AR	500 g × 1
5.		Sodium carbonate, AR	500 g × 1
6.		Sodium bicarbonate, AR	500 g × 1
7.		EDTA disodium salt	500 g × 1
8.		Ammonium chloride	500 g × 1
9.		Ammonium hydroxide	500 mL × 1
10.		Eriochrome Black T	25 g × 1
11.		Murexide indicator	25 g × 1
12.		Phenolphthalein	25 g × 1
13.		Methyl orange	25 g × 1
14.		Silver nitrate	25 g × 1
15.		Potassium chromate	100 g × 1
16.	Phytochemical	Ferric chloride	500 g × 1
17.		Folin-Ciocalteu reagent	500 mL × 1
18.		Gallic acid standard	25 g × 1*
19.		Aluminium chloride	500 g × 1
20.		Quercetin standard	10 g × 1*
21.		Sodium nitrite	500 g × 1
22.		Dragendorff reagent	100 mL × 1
23.		Mayer's reagent	100 mL × 1
24.		Wagner's reagent	100 mL × 1
25.		Lead acetate	100 g × 1
26.		Gelatin	100 g × 1
27.		Acetic anhydride	500 mL × 1
28.	Antioxidant / Functional	DPPH	5 g × 1
29.		ABTS	5 g × 1
30.		Potassium persulfate	100 g × 1
31.		TPTZ	5 g × 1
32.		Sodium acetate	500 g × 1
33.		Acetic acid, glacial	500 mL × 1
34.		Ascorbic acid	100 g × 1
35.		Trolox standard	5 g × 1*

36.	Extraction / Solvents	Methanol, analytical grade	2.5 L × 2
37.		Ethanol, analytical grade	2.5 L × 2
38.		Acetone	2.5 L × 1
39.		Hexane	2.5 L × 1**
40.		Ethyl acetate	2.5 L × 1**
41.		Whatman No. 1 filter paper	100 sheets × 2 boxes
42.		0.22 µm syringe filters	100 nos.
43.	Microbiology	0.45 µm syringe filters	100 nos.
44.		Nutrient agar	500 g × 1
45.		Nutrient broth	500 g × 1
46.		Plate Count Agar	500 g × 1
47.		MacConkey agar	500 g × 1
48.		EMB agar	500 g × 1
49.		Mueller-Hinton agar	500 g × 1
50.		Mueller-Hinton broth	500 g × 1
51.		Sabouraud Dextrose Agar	500 g × 1**
52.		Peptone water / peptone	500 g × 1
53.		Buffered peptone water	500 g × 1
54.		Gram staining kit	1 kit
55.		Sterile swabs	100 nos.
56.		Sterile membrane filters	100 nos.
57.	Glassware	Beakers – assorted sizes	24 nos.
58.		Conical flasks – assorted sizes	18 nos.
59.		Volumetric flasks – assorted sizes	18 nos.
60.		Measuring cylinders	10 nos.
61.		Test tubes	100 nos.
62.		Reagent bottles	12 nos.
63.		Amber reagent bottles	12 nos.
64.		Burettes	4 nos.
65.		Glass pipettes – assorted	12 nos.
66.		Glass funnels	6 nos.
67.	Plasticware / Disposables	10 µL micropipette tips	1,000 nos.
68.		200 µL tips	2,000 nos.
69.		1,000 µL tips	2,000 nos.
70.		Microcentrifuge tubes	1,000 nos.
71.		15 mL centrifuge tubes	250 nos.
72.		50 mL centrifuge tubes	250 nos.
73.		Disposable Petri dishes	500 nos.
74.		Disposable syringes	200 nos.
75.		Parafilm	2 rolls
76.		Aluminium foil	4 rolls
77.		Weighing boats	500 nos.

78.	Sample Collection / Storage	Sterile water-sampling bottles	100 nos.
79.		Amber sample bottles	50 nos.
80.		Screw-cap sample containers	100 nos.
81.		Zip-lock sample bags	500 nos.
82.		Cryo/sample vials	200 nos.
83.		Labels	500-1,000 nos.
84.	PPE / Miscellaneous	Nitrile gloves	10 boxes × 100
85.		Face masks	500 nos.
86.		70% ethanol/isopropanol	5 L
87.		Laboratory tissue	10 packs
88.		Autoclave bags	100 nos.
89.		Biohazard bags	100 nos.
90.		Ice packs	10 nos.



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Project -V

S.No.	Item	Specification	Qty	Preferred Source / Brand
1.	Raspberry Pi 4 (4GB)	Quad-core 64-bit SBC; CSI camera interface; USB; Wi-Fi/Bluetooth; Linux edge processing	3	Raspberry Pi / authorized distributor
2.	Jetson orin Nano	6-core Arm Cortex-A78AE v8.2 64-bit CPU, 1.5MB L2 + 4MB L3 cache, clocked up to 1.7 GHz, 8GB 128-bit LPDDR5	2	Jetson Authorized
3.	Arduino UNO Q (ABX00173) with all accessories KKSB Cases	Quad Core QRB2210 + STM32U585 MCU	5	Arduino Authorized
4.	8- in one USB C Multiport Docking Station		5	Hailo/Coral/equivalent
5.	STM32 Nucleo boards	NUCLEO-H563ZI NUCLEO-H563ZI	2	STM 32 Authorized
6.	ST Link V2	For STM 8 & STM 32 linker	5	Robu in
7.	Raspberry Pi Camera Module 3	12MP autofocus camera; CSI interface; wide/FOV option	5	Raspberry Pi
8.	USB AI accelerator	Edge inference accelerator; USB; Linux compatible	5	Hailo/Coral/equivalent
9.	MicroSD card	64 GB high-endurance/U3 card	5	SanDisk / Kingston
10.	Active cooling kit	Fan + heatsink suitable for Raspberry Pi	5	Official/equivalent
11.	CSI camera cable	Flexible camera ribbon cable in prototype length	5	Raspberry Pi/equivalent
12.	Class-D audio amplifier module	3W mono compact amplifier	3	TI-based/equivalent

13.	Miniature speaker	8Ω, 2–3W compact speaker	3	OEM/equivalent
14.	Vibration motor	3V coin/ERM motor	5	Precision Microdrives/equivalent
15.	Motor driver/transistor stage	Low-side driver with protection components	5	TI/ST/equivalent
16.	Tactile push buttons	6x6 mm / panel-mount tactile switches	30	Omron/ALPS/generic
17.	Status LEDs + resistors	3 mm/0603 LED indication set	25	Vishay/Kingbright
18.	GNSS module	Multi-constellation GNSS; UART	5	u-blox/Quectel/equivalent
19.	Active GNSS antenna	Compact patch/flex antenna	5	Taoglas/equivalent
20.	4G LTE module	LTE Cat-1/4 class; UART/USB; external antenna	5	Quectel/SimCom
21.	4G LTE antenna	Compact flexible antenna matched to modem	5	Taoglas/equivalent
22.	Data SIM / test plan	M2M/data-enabled SIM for prototype field trials	5	Airtel/Jio/Vi
23.	Nano SIM socket/breakout	Embedded SIM holder	5	Molex/Hirose/equivalent
24.	Wi-Fi antenna / RF accessories	Compact antenna and adapters as required	5	Taoglas/equivalent
25.	Li-ion/LiPo battery pack	3.7V, 5000mAh class protected pack	5	Panasonic/EVE/OEM pack
26.	1S BMS/protection	Overcharge/over-discharge/short protection	5	TI/DW01A/equivalent
27.	USB-C Li-ion charger	1S charging module with charge-status indication	5	TI/TP4056-class/equivalent
28.	5V regulator module	5V regulated output sized for processor peak load	5	Pololu/RECOM/equivalent
29.	PTC/Fuse	Resettable fuse or equivalent	10	Bourns/Littelfuse
30.	Main power switch	Compact slide/toggle switch	10	C&K/ALPS/equivalent
31.	USB-C charging connector	USB-C receptacle/breakout	5	GCT/JST/equivalent
32.	JST connector & wire set	JST-PH/XH connectors + flexible wire	5	JST/equivalent

33.	Smart-glasses frame	Lightweight ABS/TR90 frame with room for electronics	5	OEM/custom frame
34.	Main electronics enclosure	Custom split-body PETG/ABS 3D-printed enclosure	5	-
35.	Camera housing/bracket	Adjustable front-facing camera mount	10	-
36.	Speaker housing	Compact ventilated speaker mount	10	-
37.	Vibration motor holder	Flexible/3D-printed holder	10	-
38.	Camera protective window	Clear acrylic/polycarbonate piece	10	-
39.	M2/M2.5 fastener set	Screws, nuts, inserts and standoffs	2	-
40.	Perfboard / prototype PCB	General electronics prototyping boards	10	-
41.	Custom carrier PCB fabrication	2-layer prototype PCB for power/connectors/I/O	10	-
42.	PCB assembly service	SMT/through-hole assembly for carrier PCB	5	-
43.	PLA/PETG/ABS filament	Prototype frame/enclosure printing material	3	-