भारतीय प्रौद्योगिकीसंस्थानमद्रासचेन्नै 600 036
INDIAN INSTITUTE OF TECHNOLOGY MADRAS Chennai 600 036
भंडार एवं क्रय अनुभाग
STORES & PURCHASE SECTION
Email: adstores@iitm.ac.in
दूरभाष: (044) 2257 8285 / 8286 / 8287 / 8288 फैक्स: (044) 2257 8292
Telephone : (044) 2257 8285/8286/8287/8288 FAX: (044) 2257 8292
GSTIN: 33AAAAI3615G1Z6

Mrs. P.K. Sheba Sabari
Assistant Registrar (Stores & Purchase)

Date: 26.02.2023

CORRIGENDUM / ADDENDUM – I

"Supply of Complete Physiology Teaching Kit at IIT Madras – 7 Nos."
Tender No. IITM/SPS/COMPLETE PHYSIOLOGY TEACHING KIT/0029/2023-24/SPL
Tender ID: 2024_IITM_185831_1

1. In Page No. **12 & 14 of 20,** under **I Complete Physiology Teaching Kit Specification, S.No. B.2, B.3, C.4 and** under **II Software Specification of A.2, A.9 of Annexure A & B** may be read as:

Sl. No.	Technical Specifications			
I	**Complete Physiology Teaching Kit Specification**			
A	**A.1**	System should be able to measure	Basal Metabolic Rate (BMR)	
	A.2		Resting Metabolic Rate (RMR)	
	A.3		Respiratory Exchange Ratio (RER)	
	A.4		Sedentary to Light Activity	
	A.5		VO2 and VCO2	
	A.6		VO2 Max and VCO2 Max	
	A.7		Anaerobic Threshold (AT)/ Ventilatory Threshold (VT)	
B	**B.1**	System should have sensors for Volume, O2, CO2, Temp, Barometric Pressure, HR	Temp sensing range-10 – 50 deg C	
	B.2		**CO2 Sensor** **Range 0-10%** **Sense Method: NDIR**	
	B.3		**O2 Sensor** **Range 0-50 %** **Sense Method: Paramagnetic/Visible Spectrum absorption**	
C	**C.1**	System should be supplied with	Gas Analyzer Calibration Kit	
	C.2		Resuable 1000L Spirometry Flow Head	
	C.3		Clean Bore Tubing	
	C.4		Wireless Heart Rate Monitor Transmitter/Receiver Set	
	C.5		1000L Flow Head	
	C.6		Face Mask, Head Gear Assembly and non-rebreathing valve	
	C.7		5-Liter Mixing Chamber	
	C.8		Software with Metabolic Calculations Module	
II	**Software Specification**			
A.	**A.1**	Should have Audit Trail module that keeps track of user interactions in a data file and logs the interactions in a read-only log.		
	A.2	**32 or more channels of data can be displayed simultaneously at sampling rates as high as 100,000 samples/second or more.**		
	A.3	Should be able to easily convert into physical units such as grams, mmHg, PSI, etc. Simple 2-point calibration to complex multipoint non-linear calibration available.		
	A.4	Should record data continuously using Chart mode, or as sweeps using the Scope mode.		

	A.5	Should have various pacing and stimulation protocols with a built-in stimulator interface which allows delivery of a single, continuous, or train of pulses. Pulse durations, frequencies and amplitudes can be changed as the protocol is being delivered.	
	A.6	Various other protocols such as Pulse, Train, Step, S1-S2-S3, Sine wave, square wave, Constant and Custom Time-Voltage should be available.	
	A.7	The software should have full control of digital I/O lines that can be used to count events, or control devices in the lab environment.	
	A.8	Should have various analysis modules like ECG, HRV, Spike Sorting, EEG, Metabolic etc.	
	A.9	**Should be able to install in at least 25 different computers with acquisition and analysis.**	
	A.10	Should have Macros to Automate Tasks Start, Stop Recording, and Save files Record the data in multiple files, reducing file size making it easier to analyse the data.	
	A.11	Control Digital Outputs and Stimulators.	
	A.12	Monitor inputs and run tasks based on input events.	
	A.13	Send simulated keyboard press and mouse motion.	

Instead of

Sl. No.	**Technical Specifications**		
I	**Complete Physiology Teaching Kit Specification**		
A	**A.1**	System should be able to measure	Basal Metabolic Rate (BMR)
	A.2		Resting Metabolic Rate (RMR)
	A.3		Respiratory Exchange Ratio (RER)
	A.4		Sedentary to Light Activity
	A.5		VO2 and VCO2
	A.6		VO2 Max and VCO2 Max
	A.7		Anaerobic Threshold (AT)/ Ventilatory Threshold (VT)
B	**B.1**	System should have sensors for Volume, O2, CO2, Temp, Barometric Pressure, HR	Temp sensing range-10 – 50 deg C
	B.2		CO2 Sensor Range 0-10% Sense Method: NDIR Resolution 0.01% CO2 Error < 0.26% CO2 Drift <0.05 %
	B.3		O2 Sensor Range 0-50 % Sense Method: Paramagnetic Resolution 0.1% O2 Error & lt; 0.2% O2 Drift & lt; 0.4%
C	**C.1**	System should be supplied with	Gas Analyzer Calibration Kit
	C.2		Resuable 1000L Spirometry Flow Head
	C.3		Clean Bore Tubing
	C.4		Wireless Heart Rate Monitor Transmitter/Receiver Set
	C.5		1000L Flow Head
	C.6		Face Mask, Head Gear Assembly and non-rebreathing valve
	C.7		5-Liter Mixing Chamber
	C.8		Software with Metabolic Calculations Module
II	**Software Specification**		
A.	**A.1**	Should have Audit Trail module that keeps track of user interactions in a data file and logs the interactions in a read-only log.	
	A.2	Up to 128 channels of data can be displayed simultaneously at sampling rates as high as 100,000 samples/second or more.	
	A.3	Should be able to easily convert into physical units such as grams, mmHg, PSI, etc. Simple 2-point calibration to complex multipoint non-linear calibration available.	
	A.4	Should record data continuously using Chart mode, or as sweeps using the Scope mode.	

	A.5	Should have various pacing and stimulation protocols with a built-in stimulator interface which allows delivery of a single, continuous, or train of pulses. Pulse durations, frequencies and amplitudes can be changed as the protocol is being delivered.	
	A.6	Various other protocols such as Pulse, Train, Step, S1-S2-S3, Sine wave, square wave, Constant and Custom Time-Voltage should be available.	
	A.7	The software should have full control of digital I/O lines that can be used to count events, or control devices in the lab environment.	
	A.8	Should have various analysis modules like ECG, HRV, Spike Sorting, EEG, Metabolic etc.	
	A.9	Should be able to install in at least 50 different computers with acquisition and analysis. OR 50 licenses for 50 different computers.	
	A.10	Should have Macros to Automate Tasks Start, Stop Recording, and Save files Record the data in multiple files, reducing file size making it easier to analyse the data.	
	A.11	Control Digital Outputs and Stimulators.	
	A.12	Monitor inputs and run tasks based on input events.	
	A.13	Send simulated keyboard press and mouse motion.	

2. In Page No. **7, 11 & 13 of 20,** under **Bidder Eligibility Criteria – II of Sl.No.20(point No.5), Annexure A & B** may be read as:

System should be ISO 9001:2015 / BIS / CE certified. Required compliance certificate has to be attached.
Instead of
System should be ISO 9001:2016, BIS certified. Required compliance certificate has to be attached.

3. In Page No. **12 & 14 of 20,** under **I Complete Physiology Teaching Kit Specification, S.No. D clause may be added as :**

Sl.No.	Technical Specifications
I	**Complete Physiology Teaching Kit Specification**
D	No of Channels : 12 or more channels

4. In page No.**1 & 10 of 20** Last date and opening date may be read as:

Bid submission Start Date: 29.02.2024
Last Date and Time for Uploading of Bids: 06.03.2024 @ 02.00 p.m.
Date and Time of Tender Opening: 07.03.2024 @ 3.00 p.m.
Instead of
Bid submission Start Date: 27.02.2024
Last Date and Time for Uploading of Bids: 04.03.2024 @ 02.00 p.m.
Date and Time of Tender Opening: 05.03.2024 @ 3.00 p.m.

All other conditions remain unchanged. Further queries/clarification in this regard will not be entertained.
Note: Bidder should submit the BoQ based on the tender documents and Corrigendum's issued by IITM.