University of Calcutta

Dept. of Applied Physics
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Tender Notice

Enq No.: AP/ENQ/DRS-II/RG/1/18-19
Date: 08/06/2018

To
The All Interested Parties

Dear M/s.
Please submit sealed quotation within **19/06/2018 (4 PM)** at the Office of the Department of Applied Physics for the following item.

Please enclose the copy of the following papers along with the quotation.
1. Trade License, 2. PAN Card, 3. VAT & Service Tax Registration wherever necessary

4-channel Medical signal acquisition and computerized analysis system:

Specifications for Hardware module	Number of analog input channels should be four. All of them to be compatible with for transducer and also for bio-potentials. The system should be ready to use with multifunction transducers for ECG, EMG, Integrated EMG, RMS, EOG, EEG, IR based Pulse Photoplethysmogram (PPG), and Respiration from human subject. Hardware should be preferably USB powered or/ and separately powered (Auxiliary power) channel with sampling rate of at least 25 KSPS/per channel or better. Analog sampling resolution should be 24 bit or more with SNR of 50 dB or more. Connectivity to the acquisition computer should be preferably USB. The system should comply with proper international patient safety standards (like IEC60601-1, EMC complies with IEC60601-1-2 and CE marked). The hardware operation should have automatic, user adjustable, with programmable digital and analog filtering capability. The system should have the capability to measure or check the impedance level of the transducer through inbuilt impedance checker. The hardware module(s) should be portable with the acquisition computer for collection of patient data at outdoor facility with / without mains power supply. A battery power-pack provision for continuous acquisition is desired. The system should also be up-gradable to other physiological parameters with only add on accessories for the desired parameters.

	System should come with basic hardware unit, Electrodes of hundred pcs, laboratory manual and the accessories for performing Electrocardiogram, electroencephalogram, IR based pulse Photoplethysmogram and respiration from human subject.

Specifications for Software (processing system)	1. Should support the latest operating systems (WINDOWS 7, 10, 32 bit or 64 bit). 2. To be able to view the acquired data in real time and also to save the data in different format (like .txt, .edf, .csv, mat, .wav, .jpeg, excel, and can be directly transferred the whole data to MATLAB® for further analysis). 3. Should be capable of on-line and off-line analysis and should have the facility of FFT, PSD and Histogram measurement. Programmable analog and digital should have filters should be automatic or user adjustable. The gain should be programmable or auto-adjustable (5-50,000X or more). 4. Software should be full latest version for all parameters with multiple display modes with event marking features. 5. Desirable to have facility for transducer/accessories impedance check. 6. Fully automated analysis of physiological signals and curate detection of fiducial points and peripheral processing capability (like interval extraction). 7. To have the capability for continuous recording of physiological signal up to 3hrs or more.

For
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