OFFICE OF THE PRINCIPAL: INDUSTRIAL TRAINING INSTITUTE: BHUBANESWAR

Quotation Call Notice No. 2007 **/Dt.** 29.10.2020

Sealed quotations are invited from reputed firms/ Agencies for supply of Software for IoT and Sensor and its Application to this Govt. ITI, Bhubaneswar. The rates to be separately quoted mentioning percentage of taxes applicable along with terms & conditions of delivery and payment thereof. The quotations must be submitted by Speed Post only.

The sealed quotation must be submitted to the undersigned on or before 13.11.2020 up to 2 .00 PM and will be opened on the same day at 3.00 PM. in presence of Purchase Committee members & firm representative. The quotations are required to submit the following documents.

1. Copy of up to date GST Registration Certificate.
2. PAN Card Xerox Copy

The authority reserves the right to correct / reject/ modify/delete any /all conditions of quotations without assigning any reason thereof.

Principal,
29/10/20
Industrial Training Institute,
Bhubaneswar

Memo No. 2008 /Dt. 29.10.2020
Copy to Notice Board, Industrial Training Institute, Bhubaneswar for general information to public and firms.

Principal,
29/10/20
Industrial Training Institute,
Bhubaneswar

Memo No. 2009(4) /Dt. 29.10.2020
Copy submitted to the Collector, Khurdha /Dist. Welfare Officer, Khurdha /Dist. Employment Officer, Khurdha /Vice-Chairman, SCTE & VT. Odisha, Bhubaneswar/Additional District Magistrate, Khurdha, Bhubaneswar with a request to display this Notice to their Notice Board for wide circulation. Copy along with the tender & Mamata Mishra for information. She is directed to hoist the information in the official website of this ITI immediately and submit the confirmation of hoist immediately.

Principal,
29/10/20
Industrial Training Institute,
Bhubaneswar

Annex-1

Sl. No.	Name of the Item with Specification	Quantity	Rate	Amount	GST	Total
1.	Teaching and Learning Virtual, Simulation Software "Simtel for Sensors and Its Applications" **The training module should include online Classroom / laboratory teaching, learning and simulation software module on Internet of Things with following key features:** · Sensor , Transducer and actuator · Difference between sensor and transducer · Signal Conditioning : Inverting amplifier , Non inverting amplifier , Differential amplifier , Instrumentation amplifier , F to V Convertor , V to F convertor , I to V Convertor , V to I convertor , Current Amplifier , High and Low Pass Filter · Characteristic of different types of Sensors. · Working of Types of Temperature Sensor like RTD , Thermocouple , LM35 , NTC · Working of Types of Light Sensor like Light Intensity like Photo Diode, Photo Transistor, Photo Voltaic Cell and LDR. · Working of Gas (Smoke), Air Quality, Atmospheric Pressure, Limit switch, capacitive displacement sensors · Working of IR Sensor like L14G1 and TSOP1738					
2.	Teaching and Learning Virtual, Simulation Software "Simtel for Internet of Things (IoT) and Its Applications" **The training module should include online Classroom / laboratory teaching, learning and simulation software module on Internet of Things with following key features:** · Basic of IoT and its architecture · Block diagram and its internal Structure of IoT · Working of Sensor like Temperature and Humidity: Air Quality Sensor Soil Moisture: Ambient Light Sensor, Soil/Water temperature, PIR Sensor. · Sensors and Actuators Interface for IoT					

	· How to Send data on Cloud · Sensor Data Monitoring using PC and Mobile · Programming Language used for IoT · Different applications of IoT					
3.	**Electronic Circuit Simulation Software with five user licenses** **The software should have following features / Specifications:** The software should have facility of circuit simulation and PCB design of analog, digital and mixed electronic circuits with their PCB layouts. It should have a library of at least 20 thousand components. It should support Spice, VHDL, Verilog, Verilog AMS and SystemC, Create Digital filters in SystemC and run in software, add MCUs in SystemC to the software. It should also have facility to analyse SMPS, RF, Communication, Power Electronics and Optoelectronic circuits. The software must be able to simulate PIC, AVR, 8051, ARM and Arduino MCUs, in digital or mixed circuit environment. It should have features to generate and debug MCU code using the integrated flow chart tool and test microcontroller applications in a mixed circuit environment. The software should have facility of fault creation in the components, automatic calculation of the component value for the optimization of designed circuit. It should support digital circuit simplification of digital logics and the implementation of logic gates using Quine-Mccluskey method and Karnaugh-Map. The software should support. symbolic analysis: automatic creation of closed form expressions and for DC, AC and Transient analysis of linear circuits. The software must support ADCs, DACs with SPI, I2C, SPI bus simulation, PM bus, SM bus simulation. It should also provide facility to study two-port parameters of networks (S, Z, Y and H), DC Transfer Characteristic with Nested sweep option and Parameter Sweeping function to study the response of components. Functions to plot the frequency response, Phasor Diagram, Nyquist Diagram and Noise Analysis. *Linux* simulation on ARM MCU should be possible. Pre-recorded (.wav) files can be used as input in circuits and transient analysis results can be converted to .wav files or played using the sound system of computers.					

	All user perpetual license of the software should support either the digital online access, and simulation or the license protection should be supported through USB hardware dongle and have facility to upgrade in future. **PCB Design:** Create Multilayer PCB layouts of circuits, with automatically placed and routed components. All components in software should be "PCB-ready" and have associated footprints which user can review and change on a component spreadsheet. It should also have 3D capability to preview the physical parts already on the schematic diagram with run time animation in 2D and 3D view, visualizations of PCB design with Enclosures in 3D, 3D printer support, Importing Footprints in 2D and 3D in industry standard formats. PCB design software should *support* both G code and Gerber generation of the data.					

Checked By: Rubina Routray
CATO

Principal,
Industrial Training Institute,
Bhubaneswar
24/12/20

Prepared By: P. N. Mohapatra
D.E.O