

OFFICE OF THE PRINCIPAL: INDUSTRIAL TRAINING INSTITUTE: BHUBANESWAR-12
Ph No-0674-2390619/2390617
E-mail ID:-principalitibbsr@gmail.com

No. 2358 Dt. 07.12.2020

To

The Proprietor
M/s. J.M.D Sales Corp.
387-A, Street No. 7
Durga Puri Extn. Delhi-93

Sub: Award of Contract for supply of Teaching, Learning and Simulation software for Sensor , IoT and Circuit Designing for IOT trade to ITI, Bhubaneswar.

Ref: Your Quotation dated on 3rd Nov.2020

Dear Sir,

You are requested to supply the Teaching, Learning and Simulation software (as per list enclosed) to ITI, Bhubaneswar on or before 15.12.2020.

The bills in duplicate along with GST Clearance Certificate and Your Bank Account Details with IFSC Code may please be submitted at the time of your supply for making payment through Transfer Credit/ RTGS.

Yours faithfully,

Principa
Principal
Industrial Training Institute
Bhubaneswar
o/c

Memo No. 2359(2)/Dated 7.12.2020

Copy to the Accounts Section/Stores In-Charge, ITI, Bhubaneswar for information and necessary action. The expenditure will be met out of the funds under available **STRIVE Funds**.

Principa
Principal
Industrial Training Institute
Bhubaneswar
o/c

Sl. No.	Name of the Item with Specification	Quantity	Rate	Amount	GST	Total
1.	<p>Virtual Software for trainer Teaching and Learning Virtual, Simulation Software "Simtel for Sensors and Its Applications"</p> <p>The training module should include online Classroom / laboratory teaching, learning and simulation software module on Internet of Things with following key features:</p> <ul style="list-style-type: none"> · 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 	15 users	8,100/-	1,21,500/-	21,870/-	1,43,370/-
2.	<p>Teaching and Learning Virtual, Simulation Software "Simtel for Internet of Things (IoT) and Its Applications"</p> <p>The training module should include online Classroom / laboratory teaching, learning and simulation software module on Internet of Things with following key features:</p> <ul style="list-style-type: none"> · 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. 	15 users	8,400/-	1,26,000/-	22,680/-	1,48,680/-

	<ul style="list-style-type: none"> · 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.	<p>Electronic Circuit Simulation Software with five user licenses</p> <p>The software should have following features / Specifications:</p> <p>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. <i>Linux</i> simulation on ARM MCU should be possible.</p>	5 users	33,000	1,65,000/-	29,700/-	1,94,700/-

<p>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.</p> <p>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.</p> <p>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.</p>					
Grand Total :					4,86,750/-

(Rupees four lakh eighty six thousand seven hundred fifty) Only

Checked by
Sanita Singh
 CATO in Electronics
 Mechanic

Prepared by
S.N. Mahapatra
 D.E.O

Principals
 Principal,
 Industrial Training Institute,
 Bhubaneswar