

Sant Gadge Baba Amravati University, Amravati

2.3.2 ICT- enabled tools including online resources for effective teaching and learning processes

Applied Electronics





Amravati, Maharashtra, India

Barack 2, Sant Gadge Baba Amravati University, SRPF Colony,

Amravati, Maharashtra 444602, India

Lat N 20° 56' 26.2608"

Long E 77° 48' 6.1128"

12/03/21 12:18 PM

Biotechnology



Amravati, Maharashtra, India

Physics Department, Sant Gadge Baba Amravati University, SRPF

Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 14.7732"

Long E 77° 48' 0.144"

12/03/21 01:10 PM



Amravati, Maharashtra, India

Physics Department, Sant Gadge Baba Amravati University, SRPF

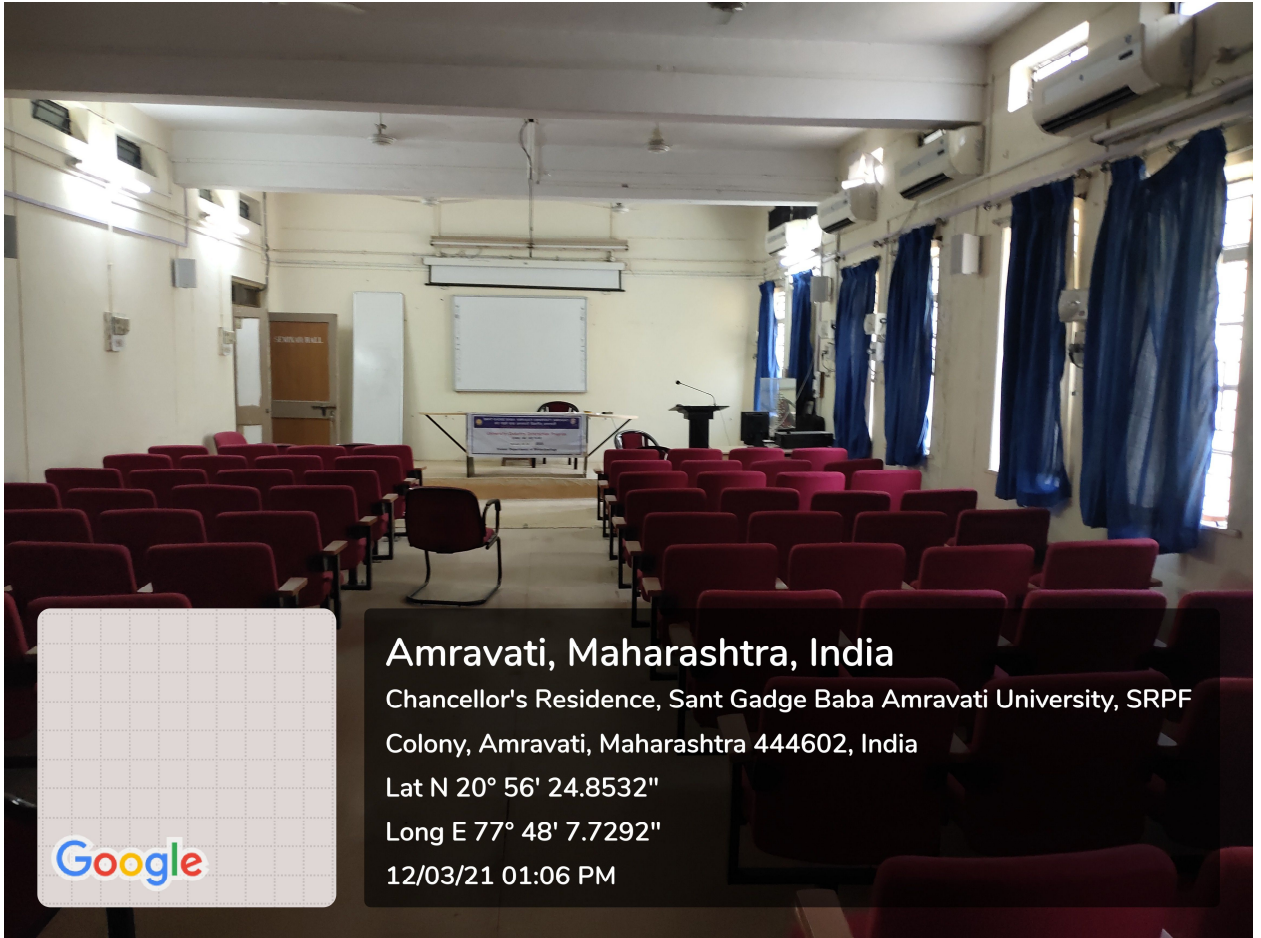
Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 14.4204"

Long E 77° 47' 59.946"

12/03/21 01:11 PM





Google

Amravati, Maharashtra, India

Chancellor's Residence, Sant Gadge Baba Amravati University, SRPF
Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 24.8532"

Long E 77° 48' 7.7292"

12/03/21 01:06 PM



Amravati, Maharashtra, India

Chancellor's Residence, Sant Gadge Baba Amravati University, SRPF
Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 24.8532"

Long E 77° 48' 7.7292"

12/03/21 01:04 PM

Google

Botany



Amravati, Maharashtra, India

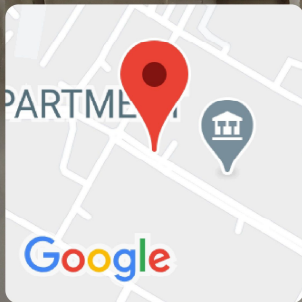
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Colony, Amravati, Maharashtra 444602, India

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15/03/21 02:42 PM



Amravati, Maharashtra, India

Unnamed Road, Sant Gadge Baba Amravati University, SRPF

Colony, Amravati, Maharashtra 444602, India

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Long E 77° 48' 3.9852"

15/03/21 02:39 PM

Business Administration and Management



Amravati, Maharashtra, India

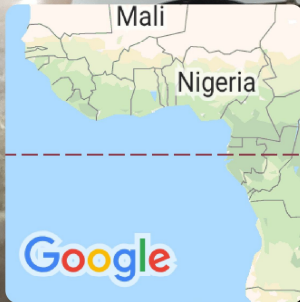
Mathematics & Statistics Department, Sant Gadge Baba Amravati

University, SRPF Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 18.6288"

Long E 77° 48' 10.2672"

15/03/21 01:07 PM



Amravati, Maharashtra, India

Mathematics & Statistics Department, Sant Gadge Baba Amravati

University, SRPF Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 18.6288"

Long E 77° 48' 10.2672"

15/03/21 01:09 PM



Amravati, Maharashtra, India

Unnamed Road, Sant Gadge Baba Amravati University, SRPF

Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 19.8276"

Long E 77° 48' 9.2736"

15/03/21 01:13 PM



Amravati, Maharashtra, India

Unnamed Road, Sant Gadge Baba Amravati University, SRPF

Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 20.076"

Long E 77° 48' 8.2116"

15/03/21 01:18 PM

Chemical Technology





Amravati, Maharashtra, India

Physical Education Department, Sant Gadge Baba Amravati
University, SRPF Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 9.492"

Long E 77° 48' 7.4664"

12/03/21 01:51 PM



Amravati, Maharashtra, India

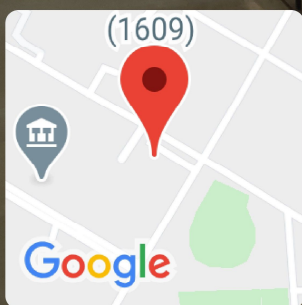
Physical Education Department, Sant Gadge Baba Amravati
University, SRPF Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 8.3472"

Long E 77° 48' 7.8804"

12/03/21 01:46 PM

Chemistry



Amravati, Maharashtra, India

Mathematics & Statistics Department, Sant Gadge Baba Amravati
University, SRPF Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 21.1056"

Long E 77° 48' 14.562"

15/03/21 03:23 PM

Computer Science



Amravati, Maharashtra, India

Barack 2, Sant Gadge Baba Amravati University, SRPF Colony,
Amravati, Maharashtra 444602, India

Lat N 20° 56' 25.89"

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12/03/21 12:03 PM



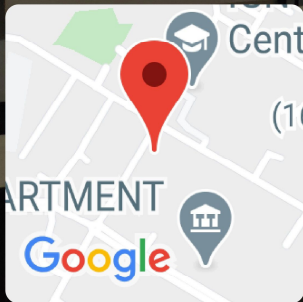
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Barack 2, Sant Gadge Baba Amravati University, SRPF Colony,
Amravati, Maharashtra 444602, India

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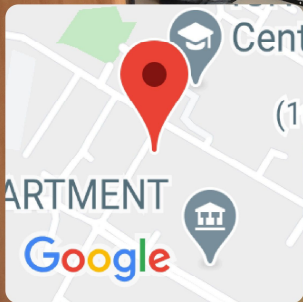
Amravati, Maharashtra, India

Barack 2, Sant Gadge Baba Amravati University, SRPF Colony,
Amravati, Maharashtra 444602, India

Lat N 20° 56' 25.9368"

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12/03/21 12:02 PM



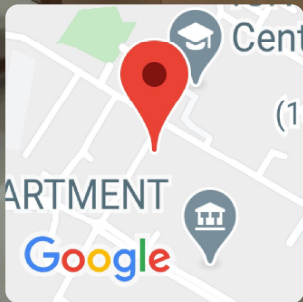
Amravati, Maharashtra, India

Barack 2, Sant Gadge Baba Amravati University, SRPF Colony,
Amravati, Maharashtra 444602, India

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12/03/21 11:49 AM



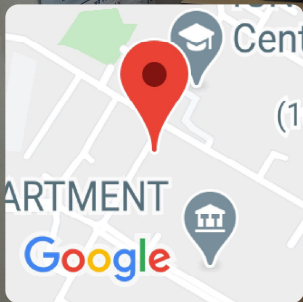
Amravati, Maharashtra, India

Barack 2, Sant Gadge Baba Amravati University, SRPF Colony,
Amravati, Maharashtra 444602, India

Lat N 20° 56' 25.8396"

Long E 77° 48' 4.9644"

12/03/21 11:50 AM



Amravati, Maharashtra, India

Barack 2, Sant Gadge Baba Amravati University, SRPF Colony,

Amravati, Maharashtra 444602, India

Lat N 20° 56' 25.9116"

Long E 77° 48' 4.9536"

12/03/21 11:51 AM



Amravati, Maharashtra, India

Barack 2, Sant Gadge Baba Amravati University, SRPF Colony,
Amravati, Maharashtra 444602, India

Lat N 20° 56' 26.178"

Long E 77° 48' 6.1128"

12/03/21 12:02 PM

Education



Amravati, Maharashtra, India

Mathematics & Statistics Department, Sant Gadge Baba Amravati

University, SRPF Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 17.4732"

Long E 77° 48' 10.3248"

15/03/21 12:42 PM



Amravati, Maharashtra, India

Mathematics & Statistics Department, Sant Gadge Baba Amravati

University, SRPF Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 17.4552"

Long E 77° 48' 10.6992"

15/03/21 12:40 PM

English



Amravati, Maharashtra, India

Unnamed Road, Sant Gadge Baba Amravati University, SRPF

Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 19.7736"

Long E 77° 48' 6.4368"

15/03/21 02:29 PM

Geology



Amravati, Maharashtra, India

Physical Education Department, Sant Gadge Baba Amravati
University, SRPF Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 12.2496"

Long E 77° 48' 8.3196"

15/03/21 12:19 PM



Amravati, Maharashtra, India

Physical Education Department, Sant Gadge Baba Amravati
University, SRPF Colony, Amravati, Maharashtra 444602, India
Lat N 20° 56' 12.2892"

Long E 77° 48' 8.3196"

15/03/21 12:21 PM



Amravati, Maharashtra, India

Physical Education Department, Sant Gadge Baba Amravati

University, SRPF Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 12.2892"

Long E 77° 48' 8.3196"

15/03/21 12:22 PM



Amravati, Maharashtra, India

Physical Education Department, Sant Gadge Baba Amravati

University, SRPF Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 12.2532"

Long E 77° 48' 8.3268"

15/03/21 12:25 PM

Hindi



Amravati, Maharashtra, India

Mathematics & Statistics Department, Sant Gadge Baba Amravati

University, SRPF Colony, Amravati, Maharashtra 444602, India

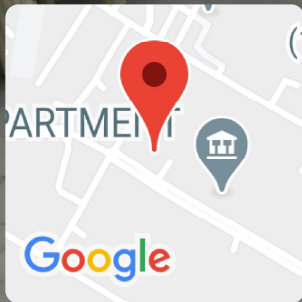
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12/03/21 02:37 PM

Library and Information Science





Amravati, Maharashtra, India

SRPF Colony, Camp Area, Sant Gadge Baba Amravati University,

SRPF Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 22.0128"

Long E 77° 48' 4.2804"

15/03/21 02:57 PM

Marathi





Amravati, Maharashtra, India

Mathematics & Statistics Department, Sant Gadge Baba Amravati

University, SRPF Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 18.0672"

Long E 77° 48' 9.612"

12/03/21 02:30 PM





Amravati, Maharashtra, India

Mathematics & Statistics Department, Sant Gadge Baba Amravati

University, SRPF Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 18.672"

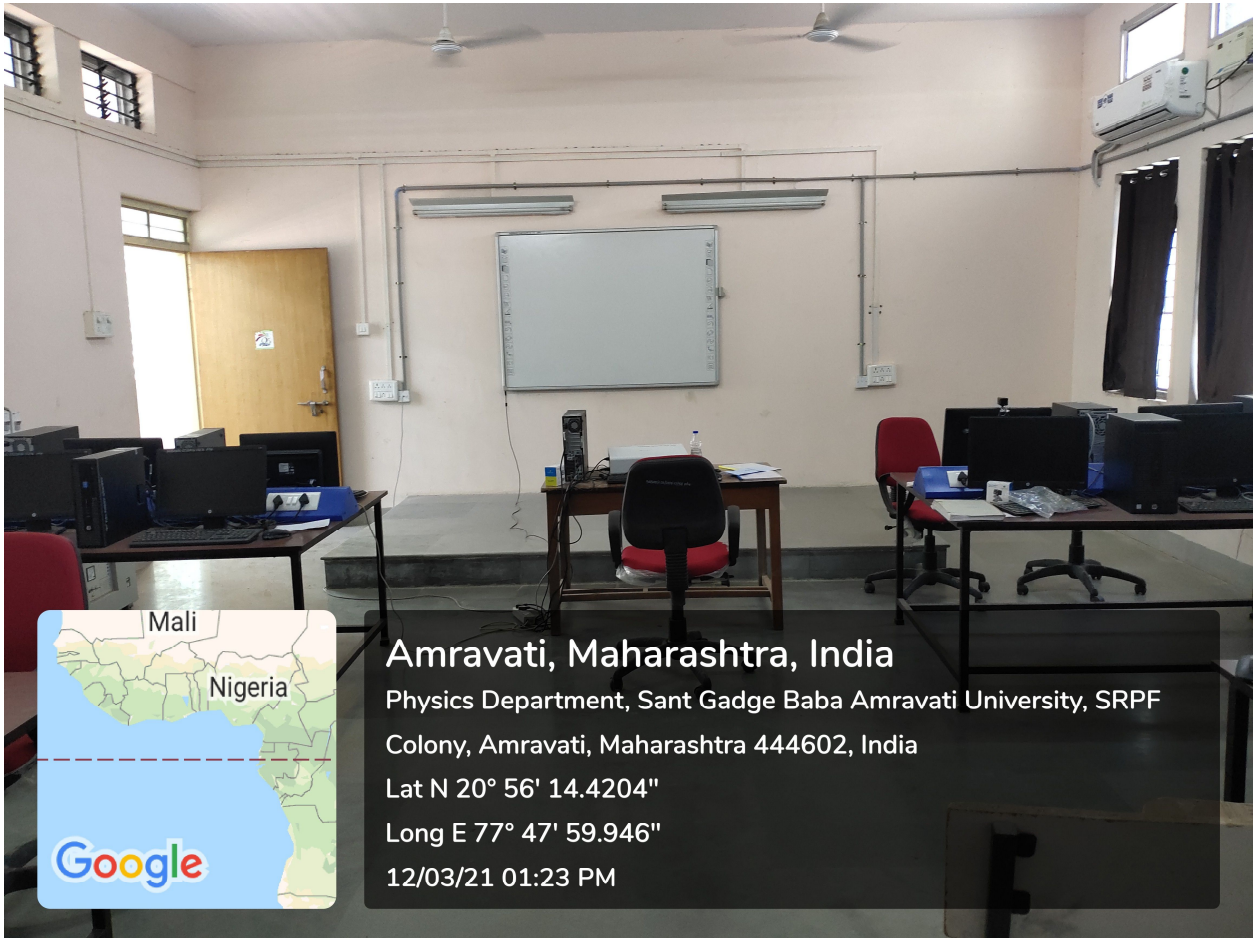
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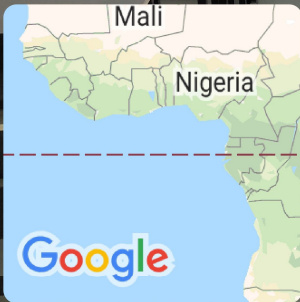
12/03/21 02:32 PM

Microbiology



Physics





Amravati, Maharashtra, India

Physics Department, Sant Gadge Baba Amravati University, SRPF

Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 14.4204"

Long E 77° 47' 59.946"

12/03/21 01:25 PM



Amravati, Maharashtra, India

Physics Department, Sant Gadge Baba Amravati University, SRPF

Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 15.4392"

Long E 77° 48' 0.3816"

12/03/21 01:32 PM



Amravati, Maharashtra, India

Physics Department, Sant Gadge Baba Amravati University, SRPF
Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 15.4392"

Long E 77° 48' 0.3816"

12/03/21 01:30 PM



Amravati, Maharashtra, India

Physics Department, Sant Gadge Baba Amravati University, SRPF

Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 15.4392"

Long E 77° 48' 0.3816"

12/03/21 01:28 PM



Amravati, Maharashtra, India

Physics Department, Sant Gadge Baba Amravati University, SRPF

Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 14.4204"

Long E 77° 47' 59.946"

12/03/21 01:19 PM



Amravati, Maharashtra, India

Physics Department, Sant Gadge Baba Amravati University, SRPF

Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 14.4996"

Long E 77° 47' 59.784"

12/03/21 01:10 PM

Physical Education





Amravati, Maharashtra, India

Physical Education Department, Sant Gadge Baba Amravati
University, SRPF Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 7.764"

Long E 77° 48' 11.6964"

15/03/21 12:00 PM



Amravati, Maharashtra, India

Physical Education Department, Sant Gadge Baba Amravati

University, SRPF Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 8.2644"

Long E 77° 48' 11.1996"

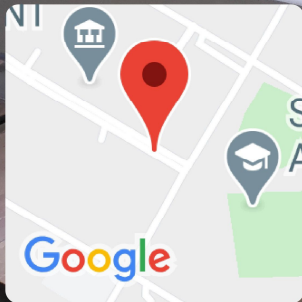
15/03/21 12:03 PM

Sociology



Zoology





Amravati, Maharashtra, India

Unnamed Road, Sant Gadge Baba Amravati University, SRPF

Colony, Amravati, Maharashtra 444602, India

Lat N 20° 56' 16.1556"

Long E 77° 48' 11.79"

15/03/21 01:48 PM



Amravati, Maharashtra, India

Mathematics & Statistics Department, Sant Gadge Baba Amravati

University, SRPF Colony, Amravati, Maharashtra 444602, India

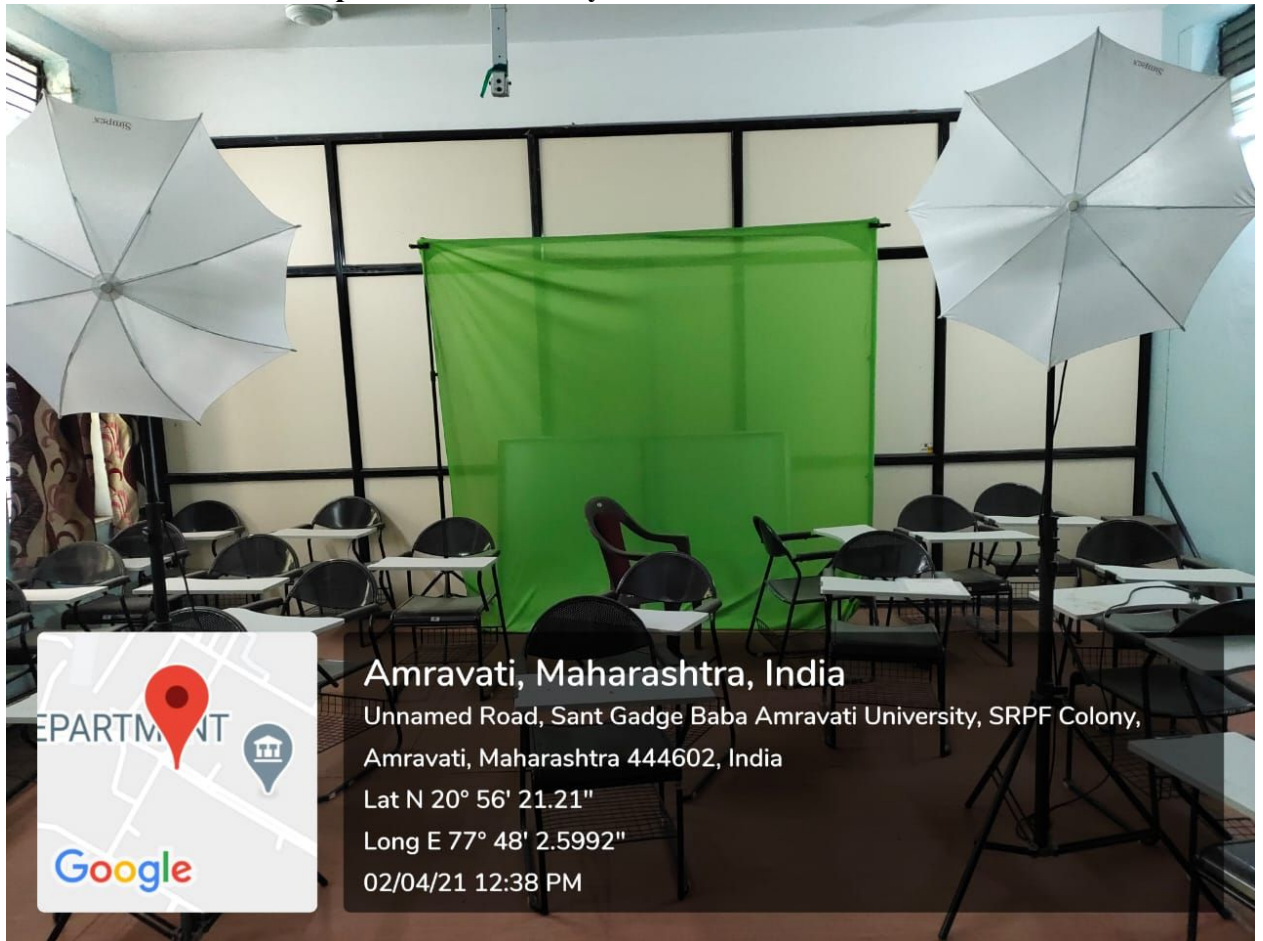
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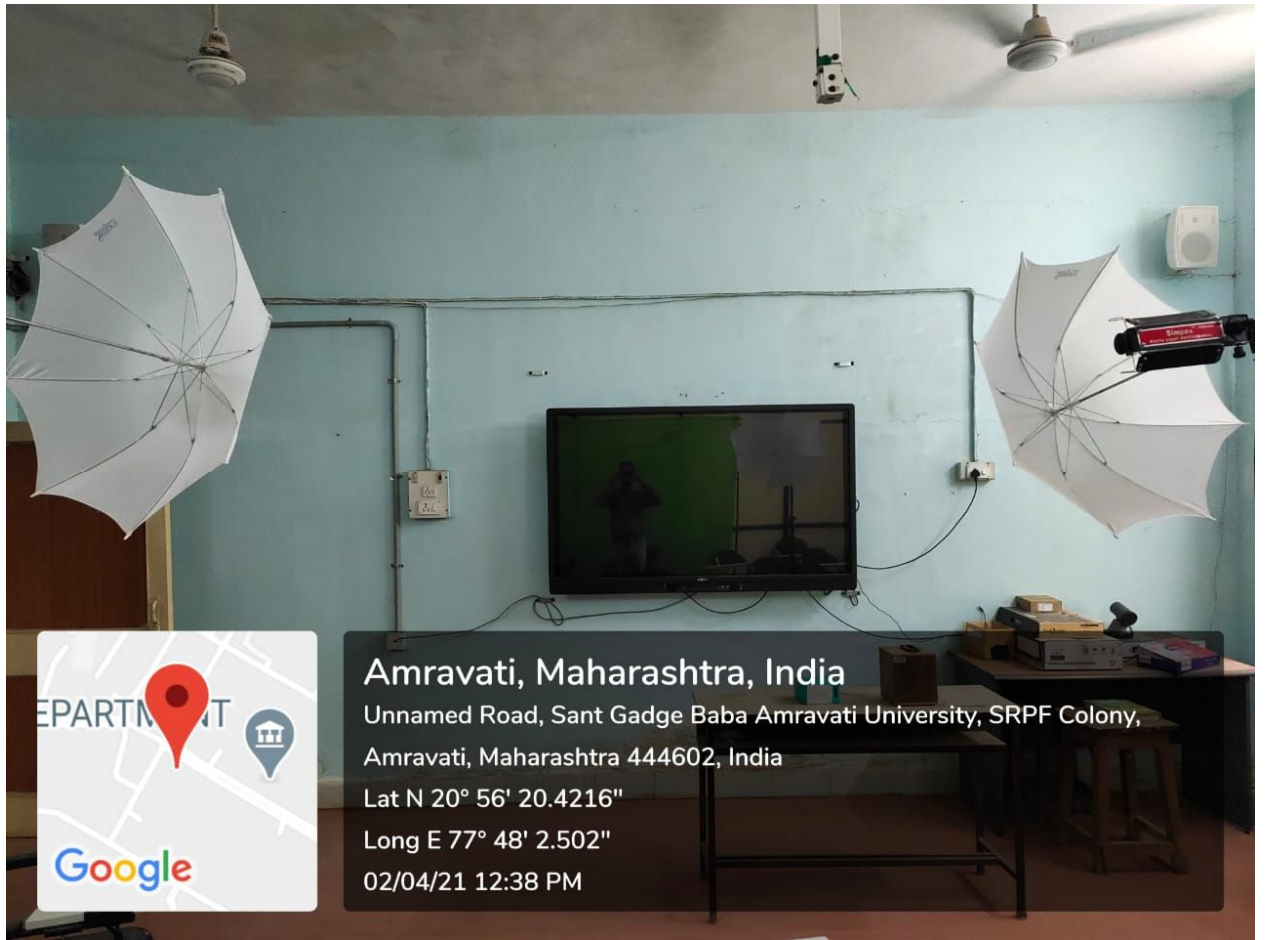
Long E 77° 48' 10.7784"

15/03/21 01:46 PM

Virtual Classrooms : (Botany, Computer Science, MBA, Zoology)

1) Virtual Classroom at Department of Botany :





Amravati, Maharashtra, India

Unnamed Road, Sant Gadge Baba Amravati University, SRPF Colony,
Amravati, Maharashtra 444602, India

Lat N 20° 56' 20.4216"

Long E 77° 48' 2.502"

02/04/21 12:38 PM

2) Virtual Classroom at Department of Computer Science :



Amravati, Maharashtra, India

Barack 2, Sant Gadge Baba Amravati University, SRPF Colony,
Amravati, Maharashtra 444602, India

Lat N 20° 56' 25.9368"

Long E 77° 48' 4.9536"

12/03/21 11:56 AM



Amravati, Maharashtra, India

Barack 2, Sant Gadge Baba Amravati University, SRPF Colony,
Amravati, Maharashtra 444602, India

Lat N 20° 56' 25.9368"

Long E 77° 48' 4.9536"

12/03/21 11:53 AM

3) Virtual Classroom at Department of Business Administration and Management :



4) Virtual Classroom at Department of Zoology:



Gram : AMUNI

Phone No. 0721-2664385
FAX No. 0721-2662135Outward No.....**402 A**
Date :15.01.2020SANT GADGE BABA AMRAVATI UNIVERSITY
University Campus (Tapovan), Post Box No. 502
AMRAVATI - 444 602ORDER NO. 15, Dt.15.01.2020, Department: Computer Centre
GSTIN: 27AAAJ3254J1ZWTo,
M/s. Neela Traders,
Buty Mahal, Sitabuldy,
Nagpur-440012

11)

Sub : Purchase order for Equipment.

Ref. : E- Tender ID : 2019_SGBAU_472113-1, due date 28.8.2019

With reference to above, the quoted rates sanctioned by Purchase Committee on dated 5.9.19 vide item no.41, please arrange to supply the following article subject to terms & conditions.

Sr. No.	Description of Item	Qty.	Rate per no./item	Total (INR)
1	Virtual Classroom setup for Botany, MBA, Computer Science & Zoology Department			
1.1	Touch LED Display : Technology : LED (Light Emitting Diode) Backlit Display Display size (Diagonal) : Diagonal 65 inch or Higher Aspect Ratio: 16:9/16:10 Resolution: 1920 X 1080 or higher Contrast Ratio: 15000:1 or higher Brightness:500 cd/m2 or higher Display colour: 8 bit-16 million colours or better Input Ports : USB port for Android x 2, VGA IN x 1, VGA Out x 1, HDMI x 3, USB B Type for Touch x 1, LAN Port for Android x 1, SDIF, RS-232, YPbPr, Video IN, Video Out Audio: Minimum two inbuilt front throw speakers of minimum 20 W rms each Communication port: RS 232C & LAN Multi Touch: IR Sensor based Touch technology with minimum 6 touch capability Power supply requirement: 230V AC +/- 10%, 50 Hz Max Power consumption: Maximum 400 Watts Accessories to be supplied: (With five years warranty) (Globus Make)	04✓	267475.00	1069900.00
	Special Features: Features: - Energy Saving – Ideal to Standby Time Scheduled Power On / Off Screen Shot in Single Click Wireless / Wired Printer Support Child Lock Setup to avoid misuse USB port Lock for Android USB Plug & Play in Android – Document, PDF, PPT, Video, Audio Smart Eye Protection – Eye Protection Writing Mode, Eye protection Brightness control mode as per light ambient Background Change for Android			
	Integrated PC : Integrated PC Module having minimum core i5 Processor or higher with win 10 SL HDD 1 TB, RAM 8 GB DDR3 , DVD etc or higher (With five years warranty)			
	Interactive Features: Normal Pen, Smart Brush, Tool Pen, Writing Pen, Highlighter, Emphasize Pen, Brush pen, Bamboo Pen, Pen, Pencil and Texture, Different sizes available with Region eraser, Shapes, Stamp, Text, Generic consist of (shapes, Arrows, National Map, National Flag), Education Consist of Physics, chemistry, Biology, Geography, sports, arts and lab apparatus subjects, Search Light, Screen Curtain, Magic layer, turn table, explorer, screenshot, magnifier, calculator, soft keyboard, Timer, Geometry Tools, Screen recording, webcam, Screen			

	Lock, Education practical's feels like original (Maths, Physics, chemistry, Geography). Desktop Annotation, White board, Green Board, Black Board, Different types of exercise books, Customization board. Cloud storage, Cloud Download, Select & Remove blank Pages. Multiple numbers of images available like maps, agricultural, animals and many more. Can Import & Export documents/contents. Annotation of on video, PPT, PDF. Annotate on PC/ Laptop with the help of smart phone			
	Mirroring : Video of PC/Laptop shared wirelessly on Phones/Tablets without any other hardware requirement. Connect four laptop and mobile phone Wirelessly			
1.2	Audio System: -Built in Amplifier Power:100 Watts minimum -Speakers: Two speakers of Minimum 50 W each shall be a part of standard supply. -Wireless Microphone -System: Collar Microphone x 1, Wireless Microphone Receiver x 2 (With five years warranty) (Globus Make)	04 ✓	106727.5	426910.00
1.3	Video Conferencing Camera: Sensor: 1/2.8 inch HD CMOS sensor, 5MP or higher ultra 4k Video System: 1080 p-30fps/60 fps or higher WDR, 3D noise reduction function : Yes Image Flip Function: Yes Auto Gain Control : Yes Zoom: 10x optical zoom & 12Xdigital zoom View Angle: 6.3° (wide)~70° (tele) PTZ Control Protocol : Provided Input Voltage: DC12V Remote Control: IR Remote Control with Pre-sets Accessories: Ceiling Mount Kit, wireless speaker and USB Mic Specification of USB based wireless Mic and speaker OS: Android Wireless communication technologies: Bluetooth Connectivity: wireless Special features: Bluetooth connection to: Mobile devices, headset and PC. Battery Life : 15 Hours Inbuilt Speakers : (2X5 W): Yes Inbuilt Mic: Yes Range of Mic: 10 mtr. (With five years warranty) (Globus Make)	04 ✓	127590.00	510360.00
1.4	Software: Multi-Party Conferencing System Software with 1TB storage cloud Video Conferencing Feature Multi-Party Conferencing System Software with 1TB storage cloud license for 5 year with service and support 24x7 (for four user department as mention above) i) It should be designed to be used in private networks (MPLS/LAN/VPN) as well as over Internet. ii) Internet connection should not be mandatory to use video conferencing within private network. To ensure highest level of security within private networks from day 1, installation and operationalizing of solution should not require Internet. iii) Solution should be suitable for dedicated ie physical and virtualized infrastructures (vCPU) equally well in performance terms iv) Core algorithmic technology to ensure automatically the best possible video quality for every endpoint depending on its bandwidth and computing/device capacity (SVC). v) It should support UDP Multicast from Day 1 including for cases via VSAT transmission. vi) Video Communications through the Server and clients should be secured with TLS and not less than AES-256 encryption. vii) Server should use encryption in Web RTC mode as well	01 ✓	475220.00	475220.00

<p>viii) Only one TCP port should be required to be opened for the essential Server functioning and operation to work along with support for NAT traversal, Firewall/Proxy support.</p> <p>ix) Video Conferencing Solution Capabilities</p> <p>x) Ultra HD 4K (2160p) point to point calls must be doable from Day 1</p> <p>xi) Not less than 40 speaker-cum-participant videos simultaneously, i.e. in continuous presence (CP) mode, on every one's screen in Multipoint Group Conferences of HD quality.</p> <p>xii) Single Conference should support up to 250 users in 2-way conferencing. By rotation, any participant should be able to be brought on main screen for everyone else to view up to 6 speaker videos simultaneously</p> <p>xiii) Video Lecture of upto 40 participants where one person's video and audio is seen by everyone and all participants can be seen by lecturer but the participants should not see each other.</p> <p>xiv) Live Conference should be integral with any 3rd party streaming solution for unlimited stream viewers (Globus Make)</p>			
<p>Video Conferencing Client-Side Capabilities:</p> <p>i) BYOD: Should offer client apps compatible with all major Operating Systems prevailing. Solution should have client applications for all popular platforms namely Windows, Mac OS X, Linux, iOS, Android.</p> <p>ii) It is important that app for Linux distributions should also be available from day 1.</p> <p>iii) User can download the client from a server and login to the VC system. Client accounts should not be tied to specific devices, they should be login id-password based so that it can be used from any device.</p> <p>iv) Client should support Voice Activated Layout Switching from day 1</p> <p>v) Client app should have built-in echo cancellation, noise suppression and AGC features in built</p> <p>vi) It should support Web RTC connections in same conference as desktop & mobile apps.</p> <p>vii) Browser based conference should have an option for Guest to join in without pre-requisite of login id and password, just by using conference ID, guest should be able to join with audio and video.</p> <p>viii) It should have server-side video conference recording as well as client-side video conferencing recording with the ability to switch it on and off.</p> <p>ix) Solution should have Client-side Scheduling as well as Server Side Scheduling of Conferences from Day 1.</p> <p>x) Client apps should be able to control/cap the bandwidth usage and should be configurable in terms of which Server IP to connect to.</p> <p>xi) Video Conference Collaborative Tools</p> <p>xii) Dual Video ie Person's Video along with Screen/Application must be supported from Day 1</p> <p>xiii) Group File transfer between client applications must be supported from Day 1.</p> <p>xiv) Personal and group instant messaging. All the messages should be saved in internal database.</p> <p>xv) Offline chat must be supported from Day 1</p> <p>xvi) All chats must be saved in a Database from Day 1</p> <p>xvii) Address book with user groups and participants list must be available</p> <p>xviii) Advanced statuses and voting during conferences must be available.</p> <p>xix) Solution should provide access to user's directory, search and calls history.</p> <p>xx) From Day 1 Desktop sharing and remote control to be present.</p> <p>xxi) Slide shows must be supported</p> <p>xxii) Content and Application sharing must be supported</p> <p>xxiii) Video Conferencing Scalability</p> <p>xxiv) The Solution shall support unlimited deployment of Desktop clients /Mobile Clients and will support concurrent participation irrespective of number of deployments.</p>			

Gram : AMUNI

Phone No. 0721-2664385

FAX No. 0721-2662135

Outward No. 402 A

Date : 15.01.2020

SANT GADGE BABA AMRAVATI UNIVERSITY

University Campus (Tapovan), Post Box No. 502

AMRAVATI - 444 602

ORDER NO. 15, Dt. 15.01.2020, Department: Computer Centre

GSTIN: 27AAAJS3254J1ZW

To,
M/s. Neela Traders,
Buty Mahal, Sitabuldy,
Nagpur-440012

17

Sub : Purchase order for Equipment.

Ref. : E- Tender ID : 2019_SGBAU_472113-1, due date 28.8.2019

With reference to above, the quoted rates sanctioned by Purchase Committee on dated 5.9.19 vide item no.41, please arrange to supply the following article subject to terms & conditions.

Sr. No.	Description of Item	Qty.	Rate per no./item	Total (INR)
1	Virtual Classroom setup for Botany, MBA, Computer Science & Zoology Department			
1.1	Touch LED Display : Technology : LED (Light Emitting Diode) Backlit Display Display size (Diagonal) : Diagonal 65 inch or Higher Aspect Ratio: 16:9/16:10 Resolution: 1920 X 1080 or higher Contrast Ratio: 15000:1 or higher Brightness: 500 cd/m2 or higher Display colour: 8 bit-16 million colours or better Input Ports : USB port for Android x 2, VGA IN x 1, VGA Out x 1, HDMI x 3, USB B Type for Touch x 1, LAN Port for Android x 1, SDIF, RS-232, YPbPr, Video IN, Video Out Audio: Minimum two inbuilt front throw speakers of minimum 20 W rms each Communication port: RS 232C & LAN Multi Touch: IR Sensor based Touch technology with minimum 6 touch capability Power supply requirement: 230V AC +/- 10%, 50 Hz Max Power consumption: Maximum 400 Watts Accessories to be supplied: (With five years warranty) (Globus Make)	04 ✓	267475.00	1069900.00
	Special Features: Features: - Energy Saving – Ideal to Standby Time Scheduled Power On / Off Screen Shot in Single Click Wireless / Wired Printer Support Child Lock Setup to avoid misuse USB port Lock for Android USB Plug & Play in Android – Document, PDF, PPT, Video, Audio Smart Eye Protection – Eye Protection Writing Mode, Eye protection Brightness control mode as per light ambient Background Change for Android			
	Integrated PC : Integrated PC Module having minimum core i5 Processor or higher with win 10 SL HDD 1 TB, RAM 8 GB DDR3 , DVD etc or higher (With five years warranty)			
	Interactive Features: Normal Pen, Smart Brush, Tool Pen, Writing Pen, Highlighter, Emphasize Pen, Brush pen, Bamboo Pen, Pen, Pencil and Texture, Different sizes available with Region eraser, Shapes, Stamp, Text, Generic consist of (shapes, Arrows, National Map, National Flag), Education Consist of Physics, chemistry, Biology, Geography, sports, arts and lab apparatus subjects, Search Light, Screen Curtain, Magic layer, turn table, explorer, screenshot, magnifier, calculator, soft keyboard, Timer, Geometry Tools, Screen recording, webcam, Screen			

	Lock, Education practical's feels like original (Maths, Physics, chemistry, Geography). Desktop Annotation, White board, Green Board, Black Board, Different types of exercise books, Customization board. Cloud storage, Cloud Download, Select & Remove blank Pages. Multiple numbers of images available like maps, agricultural, animals and many more. Can Import & Export documents/contents. Annotation of on video, PPT, PDF. Annotate on PC/ Laptop with the help of smart phone			
	Mirroring : Video of PC/Laptop shared wirelessly on Phones/Tablets without any other hardware requirement. Connect four laptop and mobile phone Wirelessly			
1.2	Audio System: -Built in Amplifier Power:100 Watts minimum -Speakers: Two speakers of Minimum 50 W each shall be a part of standard supply. -Wireless Microphone -System: Collar Microphone x 1, Wireless Microphone Receiver x 2 (With five years warranty) (Globus Make)	04 ✓	106727.5	426910.00
1.3	Video Conferencing Camera: Sensor: 1/2.8 inch HD CMOS sensor, 5MP or higher ultra 4k Video System: 1080 p-30fps/60 fps or higher WDR, 3D noise reduction function : Yes Image Flip Function: Yes Auto Gain Control : Yes Zoom: 10x optical zoom & 12Xdigital zoom View Angle: 6.3° (wide)~70° (tele) PTZ Control Protocol : Provided Input Voltage: DC12V Remote Control: IR Remote Control with Pre-sets Accessories: Ceiling Mount Kit, wireless speaker and USB Mic Specification of USB based wireless Mic and speaker OS: Android Wireless communication technologies: Bluetooth Connectivity: wireless Special features: Bluetooth connection to: Mobile devices, headset and PC. Battery Life : 15 Hours Inbuilt Speakers : (2X5 W): Yes Inbuilt Mic: Yes Range of Mic: 10 mtr. (With five years warranty) (Globus Make)	04 ✓	127590.00	510360.00
1.4	Software: Multi-Party Conferencing System Software with 1TB storage cloud Video Conferencing Feature Multi-Party Conferencing System Software with 1TB storage cloud license for 5 year with service and support 24x7 (for four user department as mention above) i) It should be designed to be used in private networks (MPLS/LAN/VPN) as well as over Internet. ii) Internet connection should not be mandatory to use video conferencing within private network. To ensure highest level of security within private networks from day 1, installation and operationalizing of solution should not require Internet. iii) Solution should be suitable for dedicated ie physical and virtualized infrastructures (vCPU) equally well in performance terms iv) Core algorithmic technology to ensure automatically the best possible video quality for every endpoint depending on its bandwidth and computing/device capacity (SVC). v) It should support UDP Multicast from Day 1 including for cases via VSAT transmission. vi) Video Communications through the Server and clients should be secured with TLS and not less than AES-256 encryption. vii) Server should use encryption in Web RTC mode as well	01 ✓	475220.00	475220.00

<p>viii) Only one TCP port should be required to be opened for the essential Server functioning and operation to work along with support for NAT traversal, Firewall/Proxy support.</p> <p>ix) Video Conferencing Solution Capabilities</p> <p>x) Ultra HD 4K (2160p) point to point calls must be doable from Day 1</p> <p>xi) Not less than 40 speaker-cum-participant videos simultaneously, i.e. in continuous presence (CP) mode, on every one's screen in Multipoint Group Conferences of HD quality.</p> <p>xii) Single Conference should support up to 250 users in 2-way conferencing. By rotation, any participant should be able to be brought on main screen for everyone else to view up to 6 speaker videos simultaneously</p> <p>xiii) Video Lecture of upto 40 participants where one person's video and audio is seen by everyone and all participants can be seen by lecturer but the participants should not see each other.</p> <p>xiv) Live Conference should be integral with any 3rd party streaming solution for unlimited stream viewers (Globus Make)</p>			
<p>Video Conferencing Client-Side Capabilities:</p> <p>i) BYOD: Should offer client apps compatible with all major Operating Systems prevailing. Solution should have client applications for all popular platforms namely Windows, Mac OS X, Linux, iOS, Android.</p> <p>ii) It is important that app for Linux distributions should also be available from day 1.</p> <p>iii) User can download the client from a server and login to the VC system. Client accounts should not be tied to specific devices, they should be login id-password based so that it can be used from any device.</p> <p>iv) Client should support Voice Activated Layout Switching from day 1</p> <p>v) Client app should have built-in echo cancellation, noise suppression and AGC features in built</p> <p>vi) It should support Web RTC connections in same conference as desktop & mobile apps.</p> <p>vii) Browser based conference should have an option for Guest to join in without pre-requisite of login id and password, just by using conference ID, guest should be able to join with audio and video.</p> <p>viii) It should have server-side video conference recording as well as client-side video conferencing recording with the ability to switch it on and off.</p> <p>ix) Solution should have Client-side Scheduling as well as Server Side Scheduling of Conferences from Day 1.</p> <p>x) Client apps should be able to control/cap the bandwidth usage and should be configurable in terms of which Server IP to connect to.</p> <p>xi) Video Conference Collaborative Tools</p> <p>xii) Dual Video ie Person's Video along with Screen/Application must be supported from Day 1</p> <p>xiii) Group File transfer between client applications must be supported from Day 1.</p> <p>xiv) Personal and group instant messaging. All the messages should be saved in internal database.</p> <p>xv) Offline chat must be supported from Day 1</p> <p>xvi) All chats must be saved in a Database from Day 1</p> <p>xvii) Address book with user groups and participants list must be available</p> <p>xviii) Advanced statuses and voting during conferences must be available.</p> <p>xix) Solution should provide access to user's directory, search and calls history.</p> <p>xx) From Day 1 Desktop sharing and remote control to be present.</p> <p>xxi) Slide shows must be supported</p> <p>xxii) Content and Application sharing must be supported</p> <p>xxiii) Video Conferencing Scalability</p> <p>xxiv) The Solution shall support unlimited deployment of Desktop clients /Mobile Clients and will support concurrent participation irrespective of number of deployments.</p>			

<p>xxv) There should be no minimum as to the number of additional licences required to be procured for enhancing the number of online users in the system.</p> <p>xxvi) Video Conferencing Interoperability & Integration</p> <p>xxvii) It should have built-in SIP Multi gateway for 3rd-party video conferencing endpoints, PBXs and VoIP.</p> <p>xxviii) It should have built-in H323 Multi gateway for 3rd-party video conferencing endpoints.</p> <p>xxix) Must support additional video stream from H.323 endpoints via H.239 protocol. Must support content transmission to H.323 devices via H.239 protocol. Moderators must be able to turn on/off audio and video streams from SIP/H.323 devices for all participants in group conferences.</p> <p>xxx) Solution should allow permanent registration of 3rd party solutions through inbuilt SIP Gateway/H323 Gateway from day 1.</p> <p>xxxi) Server should support integration with LDAP/Active Directory from Day 1.</p> <p>xxxii) API support & detailed API documentation as well as easy integration with third-party websites should be available from Day 1.</p> <p>xxxiii) Management of Server-based Video Conferencing Solution</p> <p>xxxiv) Server should be manageable remotely via web browser.</p> <p>xxxv) It should have customizable user groups and roles from admin side.</p> <p>xxxvi) Moderators & Operator rights for user groups: Members of the group with operator rights automatically become moderators when entering any conference on the server. Several moderators can be assigned while creating a group conference in control panel.</p> <p>xxxvii) Admin panel should feature creation of group conferences, their scheduling with as well as without specific time limits and should also allow automated invitations to participants via email.</p> <p>xxxviii) From Server admin, it should be possible to cap Client side bandwidth usage.</p> <p>xxxix) Admin Panel must be provided to manage tasks such as Server registration, start, stop and state monitoring;</p> <p>xl) Server log viewing both simple and advanced/detailed logging should be featured;</p> <p>xli) Registration of new users, activation and deactivation;</p> <p>xlj) Group conferencing of different modes.</p>		
<p>Video Conferencing Technical Parameters:</p> <p>i) Audio Codecs: The solution shall be based on codecs such as G7xx, Opus Wideband HD Audio, Speex, iSAC and others proven for their quality in audio communication at lower bandwidth.</p> <p>ii) Video Codecs: The solution shall use a video codec that supports native VP8 SVC & H.264 AVC, H.263 or better Video Codec for proven video quality at lower bandwidth. It shall also support mandatorily ITU Standard based protocols like H.264 in order to ensure smooth interoperability between different systems.</p> <p>iii) Video Resolution (minimum): Native for 1-on-1 video calls: 2160p30, 1080p, 720p60, 720p30, 480p, 360p, 180p. Native for multipoint conferences: 720p30, 480p, 360p, 180p per stream. Via built-in gateway: 720p30, 4CIF, CIF, QCIF.</p> <p>iv) Content Resolution: Content sharing: identical to source up to 1080p or better. Slide shows up to 1280x1024 must be supported.</p> <p>v) Protocol(s) Supported: WebRTC, SIP, H.323, BFCP, RTSP at the minimum</p> <p>vi) Encryption AES-256, TLS. Via WebRTC: SRTP DTLS at the minimum.</p> <p>vii) Bandwidth Requirement: 2160p30 @ 8192kbps, 1080p30 @ 2048kbps, 720p60 @ 1536kbps, 720p30 @ 1024kbps, 480p30 @ 512kbps, 360p30 @ 128kbps, 180p30 @ 48kbps or better.</p>		

	viii) The system should support up to 4 Mbps in a Point to Point call and Multipoint Conferences. ix) To minimize the delay and provide uniform video-audio stream, relevant advanced technologies namely adaptive jitter buffer, dynamic bit rate adjustment should be used. x) Video streams resolution, compression ratio and frame rate are chosen dynamically and independently for every participant in a conference based on the selected layout, bandwidth, connection quality, endpoint's performance and it's hardware capabilities.			
1.5	Interactive pad: Panel Size : 9 inch diagonal or better Technology : Electromagnetic digitizing technology Resolution: 5080 lines per inch Wireless Medium : RF Range : 10 meters or more Touch Input: Battery free stylus (passive pen) Battery : Pad should have USB rechargeable Lithium-Ion batteries. Simultaneous working: More than 50 Portable devices should be able to work simultaneously. Annotation draw, Features : Annotation software shall include features like choose, pens, annotate, erase, colour, shapes, sizes, text, Edit, fonts, stamp, move, capture, picture, video, save, Rotate, undo, image gallery, print, floating key-board and Background etc. Operating System : Windows and Linux both. Weight : less than 1000 gm Operating Temperature: 5 to 40 deg C (Globus Make)	04 ✓	17666.00	70664.00
1.6	Tripod camera stand : Tripod camera stand Compatible with most video cameras, digital cameras, still cameras, GoPro devices, smartphone adapters and scopes (Globus Make)	04 ✓	6000.00	24000.00
1.7	Video Editing Software : Professional Video Editing Software with latest version licence (Globus Make)	04 ✓	44294.00	177176.00
1.8	Studio Lighting: Pair of Portable Umbrella Light Stand for Still Video Photography (9 ft) (Globus Make)	04 ✓	13700.00	54800.00
1.9	Chroma Wall kit: Chroma Wall kit portable size 5x8 or 6x8 Small and portable green screen wall perfect for quick head-shot photos or talking head videos, interviews, or live streams (Globus Make)	04 ✓	7900.00	31600.00
1.10	Labour includes fittings training, configurations, commissioning etc. : To establish the virtual classroom facilities for 1) Department of Botany, 2) Department of Computer Science, 3) Department of Business Management, 4) Knowledge Resource Centre	04 ✓	12250.00	49000.00
	Total			2889630.00
	(-)Special Discount due to short provision			630.00
	Grand total			2889000.00

Terms of payment: After satisfactory supply. ✓
Place of Delivery : Computer Centre

Taxes: Including all Taxes
Delivery Period: One month.

PLEASE MENTION PURCHASE ORDER NO, DATE, WARRANTY PERIOD OF EQUIPMENT & EQUIPMENT SERIAL NUMBER ON INVOICE & SEND THE SAME IN TRIPLICATE

Note: You are requested to deposit 5% S.D. against the total value of purchase orders issued to your firm by adjusting the amount of EMD deposited with tender cited under reference. Only after receipt of S.D. the Payment will be made.



Dy. Registrar (Store)
Sant Gadge Baba Amravati University

क्र. संगमाअवि/२/भांडार/
दिनांक : १०/१/२०२०

/२०२०

विषय : पुरवठा आदेश पत्राची प्रत पाठविण्याबाबत.....

आपल्या विभागाचे उपकरणे खरेदीचे उपरोक्त पुरवठा आदेशाची प्रत माहिती तथा पुढील कार्यवाहीसाठी पाठविण्यात येत आहे. संबंधित फर्मकडून उपकरणे प्राप्त होताच या उपकरणाची ईश्यु स्लीप तसेच फर्मचे देयक प्रमाणित करून भांडार विभागास तातडीने पुढील कार्यवाहीकरिता पाठविण्यात यावे, ही विनंती.


उपकुलसचिव (भांडार)

Copy for information and necessary action to:
Head, Computer Centre, Sant Gadge Baba Amravati University, Amravati.

१६/०१/२०२०



GST TAX INVOICE

Original For Recipient

NEELA TRADERS**Buty Mahal Sitabuldi , Nagpur- 440012****Mobile No. 9765654444**C-16
23/6/2020**GSTIN No.: 27AHKPD1233B2Z0**☒ Original for Recipient

Duplicate for Account

Duplicate for Transporter

Buyer**Invoice No.**

410

The Registrar ,**SANT GADGE BABA AMRAVATI****UNIVERSITY****Invoice Date**

12.03.2020

Delivery No.

1410

Univercity Campus (Tapovan), Post Box
No.502 , Amravati - 444 602**Delivery
Address**Virtual Classroom setup for
Botany, MBA, Computer Science
and Zoology Department**GSTIN NO.**

27AAAJ3254J1ZW

Buyer Order No

15

State Name

Maharashtra

**Buyer Order
Date**

15.01.2020

Code

27

Destination

Amravati

Contact No.**Dispatch
Through****Sr. No****Description of
Goods****HSN/SAC****GST
Rate****Qty.****UOM****Rate****Amount**

1

**Virtual Classroom setup for Botany, MBA, Computer Science and Zoology
Department****1.1**

Touch LED Display :
Technology : LED (Light Emitting Diode) Backlit
Display
Display size (Diagonal) : Diagonal 65 inch or Higher
Aspect Ratio: 16:9 16:10
Resolution: 1920 X 1080 or higher
Contrast Ratio: 15000:1 or higher
Brightness: 500 cd/m2 or higher
Display colour: 8 bit-16 million colours or better
Input Ports : USB port for Android x 2, VGA IN x 1,
VGA Out x 1, HDMI x 3, USB B Type for Touch x 1,
LAN Port for Android x 1, SDIF, RS-232, YPbPr, Video
IN, Video Out
Audio: Minimum two inbuilt front throw speakers of
minimum 20 W rms each
Communication port: RS 232C & LAN
Multi Touch: 12" Sensor based Touch technology with
minimum 6 touch capability
Power supply requirement: 230V AC +/- 10%, 50 Hz
Max Power consumption: Maximum 400 Watts
Accessories to be supplied:
(With five years warranty) (Globus Make)

85285200

28%

4

No

208964.84

835859.36



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Buty Mahal Sitabuldi , Nagpur- 440012**Mobile No. 9765654444****Special Features:****Features: -**

Energy Saving - Ideal to Standby Time
Scheduled Power On / Off
Screen Shot in Single Click
Wireless / Wired Printer Support
Child Lock Setup to avoid misuse
USB port Lock for Android
USB Plug & Play in Android - Document, PDF, PPT, Video, Audio
Smart Eye Protection - Eye Protection Writing Mode.
Eye protection Brightness control mode as per light
Background Change for Android

Integrated PC :

Integrated PC Module having minimum core i5
Processor or higher with win 10 SL HDD 1 TB. RAM 8
GB DDR3 . DVD etc or higher
(With five years warranty)

Interactive Features:

Normal Pen. Smart Brush. Tool Pen. Writing Pen.
Highlighter. Emphasize Pen. Brush pen. Bamboo Pen.
Pen. Pencil and Texture. Different sizes available with
Region eraser. Shapes. Stamp. Text. Generic consist of
(shapes, Arrows, National Map, National Flag).
Education Consist of Physics, chemistry, Biology,
Geography, sports, arts and lab apparatus subjects, Search
Light, Screen Curtain, Magic layer, turn table, explorer,
screenshot, magnifier, calculator, soft keyboard, Timer,
Geometry Tools, Screen recording, webcam, Screen
Lock, Education practical's feels like original (Maths,
Physics, chemistry, Geography). Desktop Annotation,
White board, Green Board, Black Board, Different types
of exercise books, Customization board, Cloud storage,
Cloud Download, Select & Remove blank Pages.
Multiple numbers of images available like maps,
agricultural, animals and many more. Can Import &
Export documents/contents. Annotation of on video, PPT,
PDF. Annotate on PC/ Laptop with the help of smart
phone

Mirroring :

Video of PC/Laptop shared wirelessly on Phones/Tablets
without any other hardware requirement. Connect four
laptop and mobile phone Wirelessly





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Buty Mahal Sitabuldi , Nagpur- 440012**Mobile No. 9765654444****1.2**

Audio System:

-Built in Amplifier Power:100 Watts minimum

-Speakers: Two speakers of Minimum 50 W each shall be a part of standard supply.

-Wireless Microphone

-System: Collar Microphone x 1, Wireless Microphone Receiver x 2

(With five years warranty) (Globus Make)

85182200

18%

4

No

90447.03

361788.12

1.3

Video Conferencing Camera:

Sensor: 1/2.8 inch HD CMOS sensor, 5MP or higher ultra 4k

Video System: 1080 p-30fps/60 fps or higher

WDR, 3D noise reduction function : Yes

Image Flip Function: Yes

Auto Gain Control : Yes

Zoom: 10x optical zoom & 12Xdigital zoom

View Angle: 6.3° (wide)-70° (tele)

PTZ Control Protocol : Provided

Input Voltage: DC12V

Remote Control: IR Remote Control with Pre-sets

Accessories: Ceiling Mount Kit, wireless speaker and

USB Mic

Specification of USB based wireless Mic and speaker

OS: Android

Wireless communication technologies: Bluetooth

Connectivity: wireless

Special features: Bluetooth connection to: Mobile devices, headset and PC.

Battery Life : 15 Hours

Inbuilt Speakers : (2X5 W): Yes

Inbuilt Mic: Yes

Range of Mic: 10 mtr.

(With five years warranty) (Globus Make)

85258090

18%

4

No

108127.11

432508.44

1.4

Software: Multi-Party Conferencing System Software

with 1TB storage cloud Video Conferencing Feature

Multi-Party Conferencing System Software with 1TB storage cloud license for 5 year with service and support

24x7 (for four user department as mention above)

998313

18%

1

No

402728.81

402728.81





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Buty Mahal Sitabuldi , Nagpur- 440012**Mobile No. 9765654444**

- i) It should be designed to be used in private networks (MPLS/LAN/VPN) as well as over Internet.
- ii) Internet connection should not be mandatory to use video conferencing within private network. To ensure highest level of security within private networks from day 1, installation and operationalizing of solution should not require Internet.
- iii) Solution should be suitable for dedicated ie physical and virtualized infrastructures (vCPU) equally well in performance terms
- iv) Core algorithmic technology to ensure automatically the best possible video quality for every endpoint depending on its bandwidth and computing/device capacity (SVC).
- v) It should support UDP Multicast from Day 1 including for cases via VSAT transmission.
- vi) Video Communications through the Server and clients should be secured with TLS and not less than AES-256 encryption.
- vii) Server should use encryption in Web RTC mode as well
- viii) Only one TCP port should be required to be opened for the essential Server functioning and operation to work along with support for NAT traversal, Firewall/Proxy support.
- ix) Video Conferencing Solution Capabilities
- x) Ultra HD 4K (2160p) point to point calls must be available from Day 1
- xi) Not less than 40 speaker-cum-participant videos simultaneously, i.e. in continuous presence (CP) mode, on every one's screen in Multipoint Group Conferences of HD quality.
- xii) Single Conference should support up to 250 users in 2-way conferencing. By rotation, any participant should be able to be brought on main screen for everyone else to view up to 6 speaker videos simultaneously
- xiii) Video Lecture of upto 40 participants where one person's video and audio is seen by everyone and all participants can be seen by lecturer but the participants should not see each other.
- xiv) Live Conference should be integral with any 3rd party streaming solution for unlimited stream viewers (Globus Make)





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Buty Mahal Sitabuldi , Nagpur- 440012**Mobile No. 9765654444****Video Conferencing Client-Side Capabilities:**

- i) BYOD: Should offer client apps compatible with all major Operating Systems prevailing. Solution should have client applications for all popular platforms namely Windows, Mac OS X, Linux, iOS, Android.
- ii) It is important that app for Linux distributions should also be available from day 1
- iii) User can download the client from a server and login to the VC system. Client accounts should not be tied to specific devices, they should be login id-password based so that it can be used from any device.
- iv) Client should support Voice Activated Layout Switching from day 1
- v) Client app should have built-in echo cancellation, noise suppression and AGC features in built
- vi) It should support Web RTC connections in same conference as desktop & mobile apps
- vii) Browser based conference should have an option for Guest to join in without pre-requisite of login id and password, just by using conference ID, guest should be able to join with audio and video
- viii) It should have server-side video conference recording as well as client-side video conferencing recording with the ability to switch it on and off
- ix) Solution should have Client-side Scheduling as well as Server Side Scheduling of Conferences from Day 1
- x) Client apps should be able to control/cap the bandwidth usage and should be configurable in terms of which Server IP to connect to
- xi) Video Conference Collaborative Tools
- xii) Dual Video ie Person's Video along with Screen/Application must be supported from Day 1
- xiii) Group File transfer between client applications must be supported from Day 1
- xiv) Personal and group instant messaging. All the messages should be saved in internal database
- xv) Offline chat must be supported from Day 1
- xvi) All chats must be saved in a Database from Day 1
- xvii) Address book with user groups and participants list must be available
- xviii) Advanced statuses and voting during conferences must be available
- xix) Solution should provide access to user's directory, search and calls history
- xx) From Day 1 Desktop sharing and remote control to be present
- xxi) Slide shows must be supported
- xxii) Content and Application sharing must be supported
- xxiii) Video Conferencing Scalability
- xxiv) The Solution shall support unlimited deployment of Desktop clients Mobile Clients and will support concurrent participation irrespective of number of





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xxv) There should be no minimum as to the number of additional licences required to be procured for enhancing the number of online users in the system.

xxvi) Video Conferencing Interoperability & Integration

xxvii) It should have built-in SIP Multi gateway for 3rd-party video conferencing endpoints, PBXs and VoIP.

xxviii) It should have built-in H323 Multi gateway for 3rd-party video conferencing endpoints.

xxix) Must support additional video stream from H.323 endpoints via H.239 protocol. Must support content transmission to H.323 devices via H.239 protocol.

Moderators must be able to turn on/off audio and video streams from SIP/H.323 devices for all participants in group conferences.

xxx) Solution should allow permanent registration of 3rd party solutions through inbuilt SIP Gateway/H323 Gateway from day 1.

xxxi) Server should support integration with LDAP/Active Directory from Day 1.

xxxii) API support & detailed API documentation as well as easy integration with third-party websites should be available from Day 1.

xxxiii) Management of Server-based Video Conferencing Solution

xxxiv) Server should be manageable remotely via web browser.

xxxv) It should have customizable user groups and roles from admin side.

xxxvi) Moderators & Operator rights for user groups: Members of the group with operator rights automatically become moderators when entering any conference on the server. Several moderators can be assigned while creating a group conference in control panel.

xxxvii) Admin panel should feature creation of group conferences, their scheduling with as well as without specific time limits and should also allow automated invitations to participants via email.

xxxviii) From Server admin, it should be possible to cap Client side bandwidth usage.

xxxix) Admin Panel must be provided to manage tasks such as Server registration, start, stop and state monitoring;

xl) Server log viewing both simple and advanced/detailed logging should be featured;

xli) Registration of new users, activation and deactivation;

xliv) Group conferencing of different modes.





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Buty Mahal Sitabuldi , Nagpur- 440012**Mobile No. 9765654444****Video Conferencing Technical Parameters:**

i) Audio Codecs: The solution shall be based on codecs such as G7xx, Opus Wideband HD Audio, Speex, iSAC and others proven for their quality in audio communication at lower bandwidth.

ii) Video Codecs: The solution shall use a video codec that supports native VP8 SVC & H.264 AVC, H.263 or better Video Codec for proven video quality at lower bandwidth. It shall also support mandatorily ITU Standard based protocols like H.264 in order to ensure smooth interoperability between different systems.

iii) Video Resolution (minimum): Native for 1-on-1 video calls: 2160p30, 1080p, 720p60, 720p30, 480p, 360p, 180p. Native for multipoint conferences: 720p30, 480p, 360p, 180p per stream. Via built-in gateway: 720p30, 4CIF, CIF, QCIF.

iv) Content Resolution: Content sharing: identical to source up to 1080p or better. Slide shows up to 1280x1024 must be supported.

v) Protocol(s) Supported: WebRTC, SIP, H.323, BFCP, RTSP at the minimum

vi) Encryption AES-256, TLS. Via WebRTC: SRTP DTLS at the minimum.

vii) Bandwidth Requirement: 2160p30 @ 8192kbps, 1080p30 @ 2048kbps, 720p60 @ 1536kbps, 720p30 @ 1024kbps, 480p30 @ 512kbps, 360p30 @ 128kbps, 180p30 @ 48kbps or better.

viii) The system should support up to 4 Mbps in a Point to Point call and Multipoint Conferences.

ix) To minimize the delay and provide uniform video-audio stream, relevant advanced technologies namely adaptive jitter buffer, dynamic bit rate adjustment should be used.

x) Video streams resolution, compression ratio and frame rate are chosen dynamically and independently for every participant in a conference based on the selected layout, bandwidth, connection quality, endpoint's performance and it's hardware capabilities.





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Buty Mahal Sitabuldi , Nagpur- 440012**Mobile No. 9765654444**

1.5 Interactive pad: Panel Size : 9 inch diagonal or better Technology : Electromagnetic digitizing technology Resolution: 5080 lines per inch Wireless Medium : RF Range : 10 meters or more Touch Input: Battery free stylus (passive pen) Battery : Pad should have USB rechargeable Lithium-Ion batteries. Simultaneous working: More than 50 Portable devices should be able to work simultaneously. Annotation draw. Features : Annotation software shall include features like choose, pens, annotate, erase, colour, shapes, sizes, text, Edit, fonts, stamp, move, capture, pin, ge, video, save, Rotate, undo, image gallery, print, drawing key- board and Background etc. Operating System : Windows and Linux both. Weight : less than 1000 gm Operating Temperature: 5 to 40 deg C (Globus Make)	84713010	18%	4	No	14971.18	59884.72
1.6 Tripod camera stand : Tripod camera stand Compatible with most video cameras, digital cameras, still cameras, GoPro devices, smartphone adapters and scopes (Globus Make)	9006	18%	4	Pair	5084.74	20338.96
1.7 Video Editing Software : Professional Video Editing Software with latest version licence (Globus Make)	998313	18%	4	No	37537.28	150149.12
1.8 Studio Lighting: Pair of Portable Umbrella Light Stand for Still Vi Photography (9 ft) (Globus Make)	9405	18%	4	No	11610.16	46440.64
1.9 Chroma Wall kit: Chroma Wall kit portable size 5x8 or 6x8 Small and portable green screen wall perfect for quick head-shot photos or talking head videos, interviews, or live streams (Globus Make)	9006	18%	4	No	6694.91	26779.64
1.10 Labour includes fittings training, configurations, commissioning etc. : To establish the virtual classroom facilities for 1) Department of Botany, 2) Department of Computer Science, 3) Department of Business Management, 4) Knowledge Resource Centre	995468	18%	4	No	10381.35	41525.40





GST TAX INVOICE

Original For Recipient

NEELA TRADERS

Buty Mahal Sitabuldi , Nagpur- 440012

Mobile No. 9765654444

HSN No.	Taxable Value	Central Tax		State Tax		Total Tax Amount
		Rate	Amount	Rate	Amount	
85285200	835859.36	14%	117020.31	14%	117020.3	1069899.981
85182200	361788.12	9%	32560.931	9%	32560.93	426909.9816
85258090	432508.44	9%	38925.76	9%	38925.76	510359.9592
998313	402728.81	9%	36245.593	9%	36245.59	475219.9958
84713010	59884.72	9%	5389.6248	9%	5389.625	70663.9696
9006	20338.96	9%	1830.5064	9%	1830.506	23999.9728
998313	150149.12	9%	13513.421	9%	13513.42	177175.9616
9406	46440.64	9%	4179.6576	9%	4179.658	54799.9552
9006	26779.64	9%	2410.1676	9%	2410.168	31599.9752
995468	41525.4	9%	3737.286	9%	3737.286	48999.972
						0.276
Total	2378003.21		255813.26		255813.3	2889630.00

Tax Amount (In Words) :

Twenty Eight Lac Eighty Nine Thousand Only

Total

2378003.21

SGST

255813.26

CGST

255813.26

Bank Details

Bank Name	Bank A/c No.	IFSC Code	Branch	R OFF +	0.27
Bank Of Maharashtra	60319689048	MAHB0000312	MIDC HINGNA	Grand Total	2889630.00
GST IN No	Pan No	Email ID		Special Discount	630.00
27AHKPD1233B2Z0	AHKPD1233B	shailesh_d_2007@yahoo.com		Grand Total	2889000.00

DECLARATION

We declare that this Invoice Shows the actual price of the Goods described and that all Particulars are True and Correct

For NEELA TRADERS



Authorised Signatory