উচ্চতর বিজ্ঞান গবেষণা কেন্দ্র (কারস্)
ঢাকা বিশ্ববিদ্যালয়
ঢাকা – ১০০০

Office of the Director

Centre for Advanced Research in Sciences
University of Dhaka
Dhaka-1000

Tender Ref. No. CARS/ST/P-349/OTM/2024   Date: 11-03 -2024

Invitation for Tender (National)

Sealed Tenders are hereby invited from reputed Supply, Installation, Testing and Commissioning of CCTV Set, Sound System, Consumables and Accessories for CARS, at the University of Dhaka.

1.	Ministry/Division	Ministry of Education
2.	Agency	University of Dhaka
3.	Procuring Entity Name	Centre for Advanced Research in Sciences (CARS), University of Dhaka.
4.	Procuring Entity Code	349
5.	Procuring Entity District	Dhaka
6.	Invitation for	Supply, Installation, Testing and Commissioning of CCTV Set, Sound System, Consumables and accessories for CARS
7.	Invitation TenderRef No.	CARS/ST/P-349/OTM/2024
8.	Date :	11-03-2024
KEY INFORMATION		
9.	Procurement Method	Open Tendering Method
FUNDING INFORMATION		
10.	Budget and Source of Funds	Revenue Budget (RB)
11.	Development Partner (if applicable)	N/A
PARTICULAR INFORMATION		
12.	Project/Programme Code (if applicable)	Not used
13.	Project/Programme Name (if applicable)	Not Applicable
14.	Tender Package No.	Lot wise
15.	Tender Package Name	Supply, Installation, Testing and Commissioning of CCTV Set, Sound System, Consumables and accessories for CARS
16.	Tender Publication Date	11-03-2024
17.	Tender Last Selling Date	**01-04-2024 Up to office hours**
18.	Tender Closing Date and Time	**Date :** **02-04-2024**	**Time:** **10:30 am**
19.	Tender Opening Date and Time	**02-04-2024**	**11:00 am**

20.	**Name & Address of the Office(s)**	**Address(s)**	
	-Selling Tender Document (Principal)	(i) Centre for Advanced Research in Sciences (CARS), University of Dhaka.	
	-Receiving Tender Document	(i) Centre for Advanced Research in Sciences (CARS), University of Dhaka.	
	-Opening Tender Document	Centre for Advanced Research in Sciences (CARS), University of Dhaka.	

21.	Place/Date/Time of Pre-Tender Meeting	**Name/Address**	**Date:**	**Time**

INFORMATION FOR TENDERER		
22.	**Eligibility of Tenderer**	(i) Up to date Trade License (ii) Up to date VAT Registration Certificate (iii) Up to date Income Tax Clearance Certificate (iv) Bank solvency Certificate (v) **Applicant must be owner of the firm or Representative of the firm will be authorized by the owner of the Firm signature with name and seal of the owner.** (vi) Country of origin and made in country will be same. If differ then

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		explain clearly with black and white. (vii) **Warranty:** One year, Installation and training must be provided by the supplier (free of cost).
23.	Brief Description of Goods	Supply, Installation, Testing and Commissioning of CCTV Set, Sound System, Consumables and accessories for CARS
24.	Brief Description of Related Services	Supply, Installation, Testing and Commissioning of CCTV Set, Sound System, Consumables and accessories for CARS
25.	Tender Document Price **TK. 3,000.00**	The Price of Tender Schedule as mentioned is to be deposited in **University of Dhaka, A/C No. 36000392, Janata Bank, T.S.C branch, Dhaka University**. Tender schedule and terms and conditions may be collected on submission of the deposit receipt from the above mentioned offices on all working days except on the date fixed for submitting the tender.

26.	Identification/ Name of Goods	Location	Tender Security Amount in Taka		Completion Time
	CCTV Set, Sound System, Consumables and accessories	CARS, DU.	Lot-1: CCTV Set and Accessories	**7,200/-**	120 days from the date of submission or Open. (Supply of Goods)
			Lot-2: Conference Delegate Unit and Sound System	**5,500/-**	
			Lot-3: Consumables and Accessories	**6,400/-**	

PROCURING ENTITY DETAILS		
27.	Name of Official Inviting Tender	Professor Dr. Ishtiaque M. Syed
28.	Designation of Official Inviting T ender	Director
29.	Address of Official Inviting Tender	Centre for Advanced Research in Sciences (CARS), University of Dhaka.
30.	Contact details of Official Inviting Tender	9661900/Ext. 4616/ 4636
31.	The procuring entity reserves the right to accept or reject any or all tenders without assigning any reason whatsoever. The procuring authority also reserves the right to omit, increase or decrease the quantities of CCTV Set, Sound System, Consumables and accessories from the Tender. The suppliers must abide by the decision of the University authority. Tender form, schedule of requirements of supply, tender notice and terms and conditions etc. will form the integral part of the tender. The suppliers should write the **name of the item and the name of the firm on the envelope clearly**. Vat, Income Tax and other Taxes, if any, imposed by the Govt. will be deducted from their bills as per Govt. rules.	

SD/-

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Section 6. Schedule of Requirements

This Section provides the List of Goods and Delivery Schedule and List of Related Services and Completion Schedule and must be carefully prepared by a Procuring Entity for each object of procurement.

Invitation for Tender No :

Date :

Tender Package No :

A. List of Goods & Related services and Delivery Schedule

Item No.	Description of Item	Unit of Measurement	Quantity	Point of Delivery	Delivery Period Required
1	2	3	4	5	6

Lot-1: CCTV Set and Accessories

Sl. No.	Product Specification	Lab./ Name	Pack size	Qnty.
1	**Accessory HDMI (10M).** (Specification:- Port- HDMI , Type- Vedio cable, Length-10 Meter, Display Resolution (Pixels)- 3840 x 2160, Warranty- 1 Year	CARS	No's	1
2	**Accessory Micronet RJ45 CAT-6 Connector.** (**Specification:-** RJ45 modular plug supports 4 twisted pairs, meet wiring scheme, Housing: polycarbonate, 94V-2, transparent color, Contact terminal: phosphor bronze, Finished: 50 micro-inch gold plating, over 50 micro inch Nickel plated on contact area, Operating temperature: -40°C to 80°C.	"	No's	100
3	**4 Port & 2 Up-Link POE Switch.** (**Specification:-** Ports- POE (1~3):10/100Mbps PoE ports (RJ45), POE (4):10/100Mbps PoE port (RJ45), Support bt 60W High Power, LAN (1~2):10/100Mbps uplink ports (RJ45). GNT-P9206EA. Transmission Rate- 200Mbps Full Duplex; 10 or 100Mbps Half Duplex. Networking Standard- IEEE 802.3i 10BASE-T, IEEE 802.3u 100BASE-TX, IEEE 802.3x Flow Control, IEEE 802.3af/at/bt Power over Ethernet. Protection Level- Lightning Protection:6KV, Per: IEC61000-4-5, ESD Protection:8KV, Per:	"	No's	4

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	IEC61000-4-2. Transmission Distance - 100Mbps /10Mbps, Auto-Adaption 250m . Power Support- Power Input: AC 90~240V Totals65W, Al Watchdog: Port 1~4, Power Output: PoE 1~3 Port: 1/2(+52V), 3/6(GND)=30W, POE 4 Port 1245(+53V),3678(GND) Compatible 1/2(+52V), 3/6(GND)<60W. Physical - Size(L*"W*H): 187mm*139mm*43mm, Weight 1.0KG, Certification- CE Mark, FCC Part15, Class B, RoHS 2.0. Warranty- 1 Year,			
4	**8 Port & 2 Up-Link POE Switch.** (Specification:- Port- 2*100Mbps Uplink ports +8*100Mbps PoE ports, GNT-P9828V6. Transmission Rate- 2000Mbps Full Duplex; 10 or 100 or 1000Mbps Half Duplex. Max transmission distance- 130m. Power support- Power input: AC 110~220V Total≤120WPoE Watchdog: Port 1-8Power output: PoE1~6Port:1/2(+52V),3/6(GND)≤30WPoE7~8Port:1245(+53V),3678(GND) compatible1/2(+52V),3/6(GND)≤60W, Ports(1-6)Support- IEEE 802.3af/at protocol, Ports(7-8)Support- IEEE 802.3af/at/bt protocol. Performance- Bandwidth: 2 Gbps, Network Latency (10 to 1000Mbps): ≦16μs (use the 64byte package size), MAC address table: 2K, The Frame Filter & Transmission Rate: 14800pps the most for 10M port, 148800pps the most for 100M port,1488000pps the most for 1000M port. Networking Standard- IEEE 802.3i 10BASE-T, IEEE 802.3u 100BASE-TX/ IEEE 802.3ab 1000BASE-T, IEEE 802.3xFlowControl, IEEE 802.3af/at/bt Power over Ethernet. Protection Level- Lightning Protection:6KV, Per: IEC61000-4-5ESD Protection:8KV, Per: IEC61000-4-2. Physical-Size(L*W*H)：187mm*139mm*43mm, Short-circuit protection. Over-Temperature protection. Warranty-1 Year.)	"	No's	2
5	**HDD 4 TB Surveillance.** (**Specification**:-Type - Surveillance HDD, Storage Capacity - 4TB, Form Factor (Inch) - 3.5 Inch, Interface(s) - SATA 6Gb/s, RPM - 5400 RPM, Data Transfer Rates - 180MB/s)	"	No's	2
6	**CAT-6 Network Cable Meter (White) CCA.** (**Specification**: Type- Network Cable. Length- 305 Meter. Product Type-Round Cable. Channel Bandwidth- 250MHz. Conductor Material- CCA (Copper content 27%). Jacket Material- FR-PVC, Cable Shielding- UTP (Unshielded Twisted Pair). AWG- 23AWG, Dimension- 410 x 410 x 240mm, Color- White. Feature- 305 m CAT6 UTP Network Cable(CCA), 305 m cost-effective CAT6 CCA, network cable, Full diameter and full length, Quality verified by Fluke test, Guaranteed long PoE transmission distance.	"	Meter	610
7	**4MM 2MP Exir Fixed Bullet Network Camera.** (**Specification:** Type- Fixed . Focal Length - 4 mm. Angle of View- Pan: 0° to 360°, tilt: 0° to 180°, rotate: 0° to 360°. Dimension- 83.7 mm × 80.7 mm × 205.6 mm (3.3" × 3.2"× 8.1"). Weight-560g. Interface- 1 RJ45 10 M/100 M self-adaptive Ethernet port Image Sensor- 1/2.9" Progressive Scan CMOS. Effective Pixels- 1920 × 1080, IR Distance- Up to 50 m. Warranty-1 Year)	"	No's	5
8	**IP 2MP DOME Camera** (**Specification:-** Type-IP Camera. Part No- DS-2CD1323G0E-I. Mega Pixels- 2.0MP. Max. Camera Resolution- 1920 x 1080. Image Sensor-	"	No's	16

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	1/2.8 Inch Progressive Scan CMOS. Shutter Speed- 1/3 s to 1/100, 000 s. Slow Shutter- Yes. Day & Night- IR Cut Filter. Night Vision- Yes. Lens- 2.8/4mm, Lens Mount-M12. Lens Adjustment Range- Pan: 0 to 360 degree , tilt: 0 to 75 degree , rotation: 0 to 360 degree. Focal Length- 2.8 mm, 4 mm. Viewing Angle.- 114.8degree (H), 62degree (V), 135.5degree (D) (2.8mm), 86degree (H), 46.5degree (V), 102.5degree (D) (4mm). General Function. Anti-flicker, heartbeat, mirror, password protection, privacy mask, watermark. Frame Rate- Main Stream Max. Frame Rat: 50Hz: 25fps (1920 × 1080, 1280 × 960, 1280 × 720) 60Hz: 30fps (1920 × 1080, 1280 × 960, 1280 × 720), Sub-stream Max. Frame Rate: 50Hz: 25fps (640 × 480, 640 × 360, 320 × 240) 60Hz: 30fps (640 × 480, 640 × 360, 320 × 24. Digital Noise Reduction (DNR)- 3D DNR, Wide Dynamic Range (WDR)- DWDR. Password Protection-Yes. Watermark-Yes. Motion Detection-Yes, Dust Protection- IP67, Water Protection- IP67. Simultaneous Live View- Up to 6 channels, Scanning System- Progressive. Video Type- H.265+/H.265/H.264+/H.264, Wavelength- 850 nm. Ingress Protection Grade- IP67.Working Distance- 30 Meter. Protocols- TCP/IP, ICMP, HTTP, HTTPS, DHCP, DNS, RTP, RTSP, RTCP, NTP, IGMP, QoS, UDP, Form Factor- Dome, Smart Alarm- Motion detection, video tampering alarm, illegal login. Body Material- Metal (Camera Body), Plastic (Bottom Base), Dimensions- 110 x 93.2mm (Camera), Color- White. Power- Coaxial Power Plug, Power Supply- 12 VDC+- 25%, 5.5 mm coaxial power plug,PoE (802.3af, class 3).			
9	**NVR 32 Channel** (**Specification**:- IP Camera Input- IP video input: 16-ch. Part No.-DS-7632NI-K2.Two-Way Talk- Two-way audio: 1-ch, RCA (2.0 Vp-p, 1kΩ). Resolution- Recording Resolution: Up to 5MP\ Synchronous Playback: Up to 16-ch synchronous playback at 4CIF resolution. Record Rate- Up to 5 MP. Video Detection- IP Video Input: 16-ch (8-ch@720P, 6-ch@1080P). Alarm Input- Alarm Input/Output: Alarm in / out 16 / 4 (optionally can be expanded to 16 / 8) Alarm Input/Output: Alarm in / out 16 / 4 (optionally can be expanded to 16 / 8). Sync Playback-Up to 16-ch synchronous playback at 4CIF resolution. Search Mode, Playback Function, Backup Mode: Yes. Interface- Network Interface: 1 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interface PoE Switch (Built In): (-16P) 16 independent 100 Mbps PoE network interfaces Power over Ethernet: (-16P) 16 independent 100 Mbps PoE network interfaces\Serial Interface: RS-232 and RS-485. Ethernet Port- Network Interface 1 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interface Power over Ethernet (-16P) 16 independent 100 Mbps PoE network interfaces. PoE- PoE Switch (Built In) (-16P) 16 independent 100 Mbps PoE network interfaces Power Consumption ≤ 20W (without hard disk, DVD-R/W or PoE) Power over Ethernet (-16P) 16 independent 100 Mbps PoE network interfaces. Network Function- 1 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interface(-16P) 16 independent 100 Mbps PoE network interfaces(-16P) 16 independent 100 Mbps PoE network interfaces. Internal HDD- Max 16TB 2 SATA interfaces for 2 HDDs + 1 DVD-R/W (default), or 4HDDs (8TB with DVD R/W + 2HDD), USB- 2 × USB 2.0 + 1 × USB 3.0. RS232, RS485-Yes. Power Supply- Max. Power 200W Power supply 100 ~ 240 VAC, Power Consumption-≤ 20W (without hard disk, DVD-R/W or PoE). Storage Conditions-Max 16TB 2 SATA interfaces for 2 HDDs + 1 DVD-R/W (default), or 4HDDs (8TB with DVD R/W + 2HDD). Dimensions- 445 × 390 ×70 mm (17.5"× 15.3" × 2.8"),	"	No's	1
10	**55 Inch Crystal UHD 4K Smart TV.**	"	No's	1

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Sl. No.	Product Specification	Lab. Name	Pack size	Qnty.
	(**Specification**:- Type- 4K UHD Crystal Smart TV, Display Port- HDMI, Part No- UA55AU8000RSFS, Analog Tuner, Eco Sensor, Remote. Power Requirement (Voltages/Frequencies)- AC100 - 240V 50/60Hz. Approx. Power Consumption- AC100 - 240V 50/60Hz. Bluetooth- Bluetooth 5.2. HDMI Port-3, Component Video Inputs-1. USB Port- 2 x USB Type-A, Digital Optical Audio Outputs-1. RF Antenna Input-1. Speaker- 2 Channel, Audio Power Output-20W. Dolby Digital Plus. Bluetooth Audio. Screen Size- 55 Inch, Display Type- 4K UHD Display, Display Resolution (Pixels)- 3840 x 2160, Color Support- 1 Billion. HDR Compatibility- HDR 10+, Dimensions- 1399 x 846 x 148mm, Wall Mount- 200 x 200mm. Bixby, Alexa Support, Connect Share (USB 2.0), Connect Share (HDD), Auto Channel Search, Digital Clean View, Picture Engine: Crystal Processor 4K, One Billion Color: Yes, PQI (Picture Quality Index): 2100, HLG (Hybrid Log Gamma): Yes, Contrast: Mega Contrast, Color: Dynamic Crystal Color, Contrast Enhancer: Yes, Auto Motion Plus: Yes, Film Mode: Yes, Filmmaker Mode (FMM): Yes, Mobile to TV - Mirroring, DLNA: Yes, Tap View: Yes, Sound Wall: Yes, Easy Setup: Yes, App Casting: Yes, Bluetooth Low Energy: Yes, WiFi Direct: Yes, TV Sound to Mobile: Yes, Sound Mirroring: Yes, Wireless Dex: Yes, Cloud Service: Microsoft 365, Tune Station: Yes, Auto Hotspot Connect: Yes, S-Share: Yes, Auto Data Backup: Yes, Analog Clean View: Yes, Triple Protection: Yes, Auto Game Mode (ALLM): Yes, eARC: Yes, HDMI Quick Switch: Yes, BT HID Built-in: Yes, USB HID Support: Yes, Teletext (TTX): Yes, IPv6 Support: Yes, MBR Support: Yes)			
11	**8 Port GIGA LITE Wave (Desktop Switch).** (**Specification**: 8× 10/100/1000Mbos Auto-Negotiation RJ45 port, supporting Auto-MDI/MDIX, Green Ethernet technology saves power, IEEE 802.3X flow control provides reliable data transfer, Plastic casing, desktop or wall-mounting design, Plug and play, no configuration needed, Fanless design ensures quiet operation.)	"	No's	1
12	INSTALLATION CHARGE	"	No's	1

Lot-2: Conference Delegate Unit and Sound System

Sl. No.	Product Specification	Lab. Name	Pack size	Qnty.
1	Conference System Control Unit , (Specification: Control Unit , Frequency Response- 100-18000Hz, Sensitivity: >75dB, Dimension (mm):480x360x85, Power consumption: 550w, Power supply: 220v, Built-in power supply device and signal amplify, Built-in volume processor for volume regulating,Fourgroupsof9p-DINplugsforseveralsystemsjoin, The power and date communication socket for video central processor, System volume can be regulated independently, MIC on number restriction: 1/2/3/5 open configurable, Designed accordance to ISO and IEC914 standards, A robust frequency response, Warranty: 1 Year)	CARS (CH)	No's	1
2	Conference System Chairman Unit, (Specification: Function, Frequencyresponse:40-16000Hz,Sensitivity:- 42±2dB, Reference: sound –receiving distance: 20-120cm, Built- in monitor loudspeaker	"	No's	1

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Sl. No.	Product Specification	Lab. Name	Pack size	Qnty.
	(1w) for volume regulating, Red indicator light on the MIC, Electric capacity type microphone, equipped withwindshieldcover,extensionpipeoptional,Thechairmanunit in the systems is unrestricted, Can join with any position in the circuit, and could control the whole process of the conference, Warranty: 01 Year.)			
3	Conference System Delegate Unit, (Specification: Function,Frequencyresponse:40-16000Hz,Sensitivity:-42±2dB,Reference:sound–receivingdistance:20-120cm,Built-inmonitorloudspeaker(1w)forvolumeregulating,Redindicator light on the MIC, Electric capacity type microphone, equipped with windshield cover, extension pipe optional, Warranty: 01 Year.)	"	No's	11
4	15 Meter Audio Cable , (Specification: Type- Audio, Length-15 Meter, Color- Black, Compatible for- Phone, car, sound box, headphone, Mac book, iPod, OS Compatibility- Windows, iOS, Android, Feature- Connect phone to car audio, sharemusicincar,compatiblewith3.5mmdevices,Warranty-1 Year.)	"	No's	2
5	20 Meter Audio Cable, (Specification: Type- Audio, Length-20 Meter, Color- Black, Compatible for- Phone, car, sound box, headphone, Mac book, iPod. OS Compatibility- Windows, iOS, Android. Feature- Connect phone to car audio, sharemusicincar,compatiblewith3.5mmdevices,Warranty-1 Year.)	"	No's	2
6	Sound Card (Zoom Meeting), (Specification: Type- External Sound Card, Part No.- SKT3, Cable Length- 0.1 Meter, Body Material-ABS, Color-Black, Feature- USB Port to Earphone and Microphone External USB Sound Card. Drive Free 3 PortOutput/IntegratedCable.EarphoneandMicrophone,Easyto Operate.ConnecttoSpeakerIndependently.WideCompatibility, Warranty-1 Year.)	"	Meter	2
7	Sound Cable Jack converter for Laptop (As by Required)	"	No's	2
8	PVC Floor Cord Cover, (Specification: 1. Made from high-grade polyurethane, extremely robust, 2. Tapered design & non-slip treadsforpedestriantraffic,3.Durabilitygivesexceptionalvalue, 4. Fully safety tested)	"	Feet	10 Feet
9	30 Meter Fiber Optic HDMI Cable, (Specification: Type- Video, Length- 30 Meter, Data Transfer Rates- 18 Gbps, Display Resolution (Pixels)- 4K (4096x2160), Feature- GoPro camera,PS4 Pro , Xbox one s, Blu-ray player, DVD, Ultra HD TV, computermonitor,hometheaterProjector,4kProjector,PortSide- 1/ HDMI Male, Side 1 Port Type/ Male, Side 1 Port Name/HDMI, Port Side-2/ HDMI Male, Side 2 Port Type/ Male, Side 2 Port Name/ HDMI, Color- Black, Warranty- 1 Year)	"	No's	1
10	Installation Charge		No's	1

Lot-3: Consumables and Accessories

Sl. No.	Product Specification	Lab. Name	Pack size	Qnty.
1	UPS Battery. Specification:- Type: Rechargeable Sealed Lead Acid Battery. Nominal Voltage:- Minimum: 12V. Nominal Capacity:- Minimum: 7Ah. Weight: Minimum- 2.1 Kg (without packet) . Case Material:- ABS UL94 HB, Option: Flammability resistance of (UL94 V-0). Dimensions:- Length(L)- 151±1 mm, Width (W)- 65±1 mm, Height(H)-94±1mm,OverallHeight(HT)-102±1mm.DesignLife:-	CARS	No's	28

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	Minimum 3 (Three) Years. Warranty:- 1 (One) Year. ChargeRetention at 20 (Degree Celsius):- After 1 Month: At Least 92%, After 3 Month: At Least 90%, After 6 Month: At Least 80%. OperatingTemperatureRange:-Charge-15(DegreeCelsius)to40 (Degree Celsius), Discharge -15 (Degree Celsius) to 50 (Degree Celsius), Storage -15 (Degree Celsius) to 40 (Degree Celsius), Terminal:- F1 Faston Tab 187, F2 Faston Tab 250.				
2	Generator Battery (Specification: Model: N-120, Plate:-21, Nominal Voltage:-12V, Nominal Capacity:-120 AH, Warranty:-18 Months, Battery Type:- Generator (Heavy Duty for 500 KVA Generator),	"	No's	2
3	Fuel Filter (Primary), Part Number: 10000-59653, FG Wilson	"	No's	1
4	Fuel Filter (Secondary), Part Number: 10000-59652, FG Wilson	"	No's	1
5	Oil Filter, Part Number: 10000-59645, FG Wilson	"	No's	1
6	Lube Oil (Delvac MX 15W-40), Specification:- Applications Requiring: API CI-4, API CH-4, API SL, API SJ, ACEA E7,Cummins CES 20077, Cummins CES 20076. Has the Following Builder approvals: Mack EO-M Plus, Mack EO-N, MB-Approval228.3, MTU Oil Category 2, RENAULT TRUCKS RLD-2, VOLVO VDS-3. Recommended by Exxonmobil for use in Applications requiring: API CG-4, API CF-4, API CF, ACEA B2,A2 , Cummins CES 20072, Cummins CES 20071, VOLVOVDS-2, Detroit 7SE 270 (4-STROKE CYCLE), Mack EO-M, RENAULT TRUCKS RLD.	"	Liter	65
7	1KVA Standard Backup Online UPS, (Specification: Type - Online UPS,VoltAmpere(VA)-1000VA,InputVoltage(V)–Minimum- 120V & Maximum- 300V, Output Voltage (V) - Minimum 220V & Maximum-240V,Frequency(Hz)–45~66Hz,TransferRate(ms)- 00ms, Battery(Qty with V & Ah) - 2 Pcs with 12V & 9Ah, Load Capacity (Watt) – Minimum-800W, Back up time(Full load) – Minimum: 15 Minutes, Others - Noise Level - <50(within 1 meter), Power Factor - 1, Type of Wave - Pure Sine wave., Specialty - Alarm - Battery low-voltage, mains abnormal, overload, UPS fault, over temperature protection, Warranty - 1 Year)	"	No's	1
8	2KVA Standard Backup Online UPS, (Specification: Type - Online UPS,VoltAmpere(VA)-2000VA,InputVoltage(V)–Minimum- 120V & Maximum- 300V, Output Voltage (V) - Minimum 220V & Maximum-240V,Frequency(Hz)–45~66Hz,TransferRate(ms)- 00ms, Battery(Qty with V & Ah) - 6 Pcs with 12V & 7Ah, Load Capacity (Watt) – Minimum-1800W, Back up time(Full load) – Minimum: 15 Minutes, Others - Noise Level - <50(within 1 meter), Power Factor - 1, Type of Wave - Pure Sine wave., Specialty - Alarm - Battery low-voltage, mains abnormal, overload, UPS fault, over temperature protection/they are ideal for supplying critical systems of up to 2000VA that require high reliability and quality supply with low operating and maintenance costs. Body Material – Metal, Back side output connection - 4 Port, Warranty - 1 Year)	"	No's	1

Warranty: 12 Months from the date of installation for the all goods.
Country of Origin : USA/UK/EU/Japan/Australia/Canada/Singapore/Equivalent.

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Section 7.Technical Specifications.

The Goods and Related Services shall comply with following Technical Specifications:

Item No	Name of Item or Related Service	Technical Specification and Standards
»	CARS	Supplier

Lot-1: CCTV Set and Accessories

Sl. No.	Product Specification
1	**Accessory HDMI (10M).** (Specification:- Port- HDMI , Type- Vedio cable, Length-10 Meter, Display Resolution (Pixels)- 3840 x 2160, Warranty- 1 Year
2	**Accessory Micronet RJ45 CAT-6 Connector.** (**Specification:-** RJ45 modular plug supports 4 twisted pairs, meet wiring scheme, Housing: polycarbonate, 94V-2, transparent color, Contact terminal: phosphor bronze, Finished: 50 micro-inch gold plating, over 50 micro inch Nickel plated on contact area, Operating temperature: -40°C to 80°C.
3	**4 Port & 2 Up-Link POE Switch.** (**Specification:-** Ports- POE (1~3):10/100Mbps PoE ports (RJ45), POE (4):10/100Mbps PoE port (RJ45), Support bt 60W High Power, LAN (1~2):10/100Mbps uplink ports (RJ45). GNT-P9206EA. Transmission Rate- 200Mbps Full Duplex; 10 or 100Mbps Half Duplex. Networking Standard- IEEE 802.3i 10BASE-T, IEEE 802.3u 100BASE-TX, IEEE 802.3x Flow Control, IEEE 802.3af/at/bt Power over Ethernet. Protection Level- Lightning Protection:6KV, Per: IEC61000-4-5, ESD Protection:8KV, Per: IEC61000-4-2. Transmission Distance - 100Mbps /10Mbps, Auto-Adaption 250m . Power Support- Power Input: AC 90~240V Totals65W, Al Watchdog: Port 1~4, Power Output: PoE 1~3 Port: 1/2(+52V), 3/6(GND)=30W, POE 4 Port 1245(+53V),3678(GND) Compatible 1/2(+52V), 3/6(GND)<60W). Physical - Size(L*"W*H): 187mm*139mm*43mm, Weight 1.0KG, Certification- CE Mark, FCC Part15, Class B, RoHS 2.0. Warranty- 1 Year,
4	**8 Port & 2 Up-Link POE Switch.** (Specification:- Port- 2*100Mbps Uplink ports +8*100Mbps PoE ports, GNT-P9828V6. Transmission Rate- 2000Mbps Full Duplex; 10 or 100 or 1000Mbps Half Duplex. Max transmission distance- 130m. Power support- Power input: AC 110~220V Total≤120WPoE Watchdog: Port 1-8Power output: PoE1~6Port:1/2(+52V),3/6(GND)≤30WPoE7~8Port:1245(+53V),3678(GND) compatible1/2(+52V),3/6(GND)≤60W, Ports(1-6)Support- IEEE 802.3af/at protocol, Ports(7-8)Support- IEEE 802.3af/at/bt protocol. Performance- Bandwidth: 2 Gbps, Network Latency (10 to 1000Mbps): ≦16μs (use the 64byte package size), MAC address table: 2K, The Frame Filter & Transmission Rate: 14800pps the most for 10M port, 148800pps the most for 100M port,1488000pps the most for 1000M port. Networking Standard- IEEE 802.3i 10BASE-T, IEEE 802.3u 100BASE-TX/ IEEE 802.3ab 1000BASE-T, IEEE 802.3xFlowControl, IEEE 802.3af/at/bt Power

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	over Ethernet. Protection Level- Lightning Protection:6KV, Per: IEC61000-4-5ESD Protection:8KV, Per: IEC61000-4-2. Physical-Size(L*W*H)：187mm*139mm*43mm, Short-circuit protection. Over-Temperature protection. Warranty-1 Year.)
5	**HDD 4 TB Surveillance**. (**Specification**:-Type - Surveillance HDD, Storage Capacity - 4TB, Form Factor (Inch) - 3.5 Inch, Interface(s) - SATA 6Gb/s, RPM - 5400 RPM, Data Transfer Rates - 180MB/s)
6	**CAT-6 Network Cable Meter (White) CCA.** (**Specification**: Type- Network Cable. Length- 305 Meter. Product Type- Round Cable. Channel Bandwidth- 250MHz. Conductor Material- CCA (Copper content 27%). Jacket Material- FR-PVC, Cable Shielding- UTP (Unshielded Twisted Pair). AWG- 23AWG, Dimension- 410 x 410 x 240mm, Color- White. Feature- 305 m CAT6 UTP Network Cable(CCA), 305 m cost-effective CAT6 CCA, network cable, Full diameter and full length, Quality verified by Fluke test, Guaranteed long PoE transmission distance.
7	**4MM 2MP Exir Fixed Bullet Network Camera.** (**Specification:** Type- Fixed . Focal Length - 4 mm. Angle of View- Pan: 0° to 360°, tilt: 0° to 180°, rotate: 0° to 360°. Dimension- 83.7 mm × 80.7 mm × 205.6 mm (3.3" × 3.2"× 8.1"). Weight-560g. Interface- 1 RJ45 10 M/100 M self-adaptive Ethernet port Image Sensor- 1/2.9" Progressive Scan CMOS. Effective Pixels- 1920 × 1080, IR Distance- Up to 50 m. Warranty-1 Year)
8	**IP 2MP DOME Camera** (**Specification:-** Type-IP Camera. Part No- DS-2CD1323G0E-I. Mega Pixels- 2.0MP. Max. Camera Resolution- 1920 x 1080. Image Sensor-1/2.8 Inch Progressive Scan CMOS. Shutter Speed- 1/3 s to 1/100, 000 s. Slow Shutter- Yes. Day & Night- IR Cut Filter. Night Vision- Yes. Lens- 2.8/4mm, Lens Mount-M12. Lens Adjustment Range- Pan: 0 to 360 degree , tilt: 0 to 75 degree , rotation: 0 to 360 degree. Focal Length- 2.8 mm, 4 mm. Viewing Angle.- 114.8degree (H), 62degree (V), 135.5degree (D) (2.8mm), 86degree (H), 46.5degree (V), 102.5degree (D) (4mm). General Function. Anti-flicker, heartbeat, mirror, password protection, privacy mask, watermark. Frame Rate- Main Stream Max. Frame Rat: 50Hz: 25fps (1920 × 1080, 1280 × 960, 1280 × 720) 60Hz: 30fps (1920 × 1080, 1280 × 960, 1280 × 720), Sub-stream Max. Frame Rate: 50Hz: 25fps (640 × 480, 640 × 360, 320 × 240) 60Hz: 30fps (640 × 480, 640 × 360, 320 × 24. Digital Noise Reduction (DNR)- 3D DNR, Wide Dynamic Range (WDR)- DWDR. Password Protection-Yes. Watermark-Yes. Motion Detection-Yes, Dust Protection- IP67, Water Protection- IP67. Simultaneous Live View- Up to 6 channels, Scanning System- Progressive. Video Type- H.265+/H.265/H.264+/H.264, Wavelength- 850 nm. Ingress Protection Grade- IP67.Working Distance- 30 Meter. Protocols- TCP/IP, ICMP, HTTP, HTTPS, DHCP, DNS, RTP, RTSP, RTCP, NTP, IGMP, QoS, UDP, Form Factor- Dome, Smart Alarm- Motion detection, video tampering alarm, illegal login. Body Material- Metal (Camera Body), Plastic (Bottom Base), Dimensions- 110 x 93.2mm (Camera), Color- White. Power- Coaxial Power Plug, Power Supply- 12 VDC+- 25%, 5.5 mm coaxial power plug,PoE (802.3af, class 3).
9	**NVR 32 Channel** (**Specification**:- IP Camera Input- IP video input: 16-ch. Part No.-DS-7632NI-K2.Two-Way Talk- Two-way audio: 1-ch, RCA (2.0 Vp-p, 1kΩ). Resolution- Recording Resolution: Up to 5MP\ Synchronous Playback: Up to 16-ch synchronous playback at 4CIF resolution. Record Rate- Up to 5 MP. Video Detection- IP Video Input: 16-ch (8-ch@720P, 6-ch@1080P). Alarm Input- Alarm Input/Output: Alarm in / out 16 / 4 (optionally can be expanded to 16 / 8) Alarm Input/Output: Alarm in / out 16 / 4 (optionally can be expanded to 16 / 8). Sync Playback-Up to 16-ch synchronous playback at 4CIF resolution. Search Mode, Playback Function, Backup Mode: Yes. Interface- Network Interface: 1 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interface PoE Switch (Built In): (-16P) 16 independent 100 Mbps PoE network interfaces Power over Ethernet: (-16P) 16 independent 100 Mbps PoE network interfaces\Serial Interface: RS-232 and RS-485. Ethernet Port-Network Interface 1 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interface Power over Ethernet (-16P) 16 independent 100 Mbps PoE network interfaces. PoE- PoE Switch (Built In) (-16P) 16 independent 100 Mbps PoE network interfaces

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	Power Consumption ≤ 20W (without hard disk, DVD-R/W or PoE) Power over Ethernet (-16P) 16 independent 100 Mbps PoE network interfaces. Network Function- 1 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interface(-16P) 16 independent 100 Mbps PoE network interfaces(-16P) 16 independent 100 Mbps PoE network interfaces. Internal HDD- Max 16TB 2 SATA interfaces for 2 HDDs + 1 DVD-R/W (default), or 4HDDs (8TB with DVD R/W + 2HDD), USB- 2 × USB 2.0 + 1 × USB 3.0. RS232, RS485-Yes. Power Supply- Max. Power 200W Power supply 100 ~ 240 VAC, Power Consumption-≤ 20W (without hard disk, DVD-R/W or PoE). Storage Conditions-Max 16TB 2 SATA interfaces for 2 HDDs + 1 DVD-R/W (default), or 4HDDs (8TB with DVD R/W + 2HDD). Dimensions- 445 × 390 ×70 mm (17.5"× 15.3" × 2.8"),
10	**55 Inch Crystal UHD 4K Smart TV.** **(Specification**:- Type- 4K UHD Crystal Smart TV, Display Port- HDMI, Part No- UA55AU8000RSFS, Analog Tuner, Eco Sensor, Remote. Power Requirement (Voltages/Frequencies)- AC100 - 240V 50/60Hz. Approx. Power Consumption- AC100 - 240V 50/60Hz. Bluetooth- Bluetooth 5.2. HDMI Port-3, Component Video Inputs-1. USB Port- 2 x USB Type-A, Digital Optical Audio Outputs-1. RF Antenna Input-1. Speaker- 2 Channel, Audio Power Output-20W. Dolby Digital Plus. Bluetooth Audio. Screen Size- 55 Inch, Display Type- 4K UHD Display, Display Resolution (Pixels)- 3840 x 2160, Color Support- 1 Billion. HDR Compatibility- HDR 10+, Dimensions- 1399 x 846 x 148mm, Wall Mount- 200 x 200mm. Bixby, Alexa Support, Connect Share (USB 2.0), Connect Share (HDD), Auto Channel Search, Digital Clean View, Picture Engine: Crystal Processor 4K, One Billion Color: Yes, PQI (Picture Quality Index): 2100, HLG (Hybrid Log Gamma): Yes, Contrast: Mega Contrast, Color: Dynamic Crystal Color, Contrast Enhancer: Yes, Auto Motion Plus: Yes, Film Mode: Yes, Filmmaker Mode (FMM): Yes, Mobile to TV - Mirroring, DLNA: Yes, Tap View: Yes, Sound Wall: Yes, Easy Setup: Yes, App Casting: Yes, Bluetooth Low Energy: Yes, WiFi Direct: Yes, TV Sound to Mobile: Yes, Sound Mirroring: Yes, Wireless Dex: Yes, Cloud Service: Microsoft 365, Tune Station: Yes, Auto Hotspot Connect: Yes, S-Share: Yes, Auto Data Backup: Yes, Analog Clean View: Yes, Triple Protection: Yes, Auto Game Mode (ALLM): Yes, eARC: Yes, HDMI Quick Switch: Yes, BT HID Built-in: Yes, USB HID Support: Yes, Teletext (TTX): Yes, IPv6 Support: Yes, MBR Support: Yes)
11	**8 Port GIGA LITE Wave (Desktop Switch).** (**Specification**: 8× 10/100/1000Mbos Auto-Negotiation RJ45 port, supporting Auto-MDI/MDIX, Green Ethernet technology saves power, IEEE 802.3X flow control provides reliable data transfer, Plastic casing, desktop or wall-mounting design, Plug and play, no configuration needed, Fanless design ensures quiet operation.)
12	INSTALLATION CHARGE

Lot-2: Conference Delegate Unit and Sound System

Sl. No.	Product Specification
1	Conference System Control Unit , (Specification: Control Unit , Frequency Response- 100-18000Hz, Sensitivity: >75dB, Dimension (mm):480x360x85, Power consumption: 550w, Power supply: 220v, Built-in power supply device and signal amplify, Built-in volume processor for volume regulating,Fourgroupsof9p-DINplugsforseveralsystemsjoin, The power and date communication socket for video central processor, System volume can be regulated independently, MIC on number restriction: 1/2/3/5 open configurable, Designed accordance to ISO and IEC914 standards, A robust frequency response, Warranty: 1 Year)
2	Conference System Chairman Unit, (Specification: Function, Frequencyresponse:40-16000Hz,Sensitivity:- 42±2dB, Reference: sound –receiving distance: 20-120cm, Built- in monitor loudspeaker (1w) for volume regulating, Red indicator light on the MIC, Electric capacity type microphone, equipped withwindshieldcover,extensionpipeoptional,Thechairmanunit in the systems is unrestricted, Can join with any position in the circuit, and could control the whole

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	process of the conference, Warranty: 01 Year.)
3	Conference System Delegate Unit, (Specification: Function,Frequencyresponse:40-16000Hz,Sensitivity:- 42±2dB,Reference:sound–receivingdistance:20-120cm,Built-inmonitorloudspeaker(1w)forvolumeregulating,Redindicator light on the MIC, Electric capacity type microphone, equipped with windshield cover, extension pipe optional, Warranty: 01 Year.)
4	15 Meter Audio Cable , (Specification: Type- Audio, Length-15 Meter, Color- Black, Compatible for- Phone, car, sound box, headphone, Mac book, iPod, OS Compatibility- Windows, iOS, Android, Feature- Connect phone to car audio, sharemusicincar,compatiblewith3.5mmdevices,Warranty-1 Year.)
5	20 Meter Audio Cable, (Specification: Type- Audio, Length-20 Meter, Color- Black, Compatible for- Phone, car, sound box, headphone, Mac book, iPod. OS Compatibility- Windows, iOS, Android. Feature- Connect phone to car audio, sharemusicincar,compatiblewith3.5mmdevices,Warranty-1 Year.)
6	Sound Card (Zoom Meeting), (Specification: Type- External Sound Card, Part No.- SKT3, Cable Length- 0.1 Meter, Body Material-ABS, Color-Black, Feature- USB Port to Earphone and Microphone External USB Sound Card. Drive Free 3 PortOutput/IntegratedCable.EarphoneandMicrophone,Easyto Operate.ConnecttoSpeakerIndependently.WideCompatibility, Warranty-1 Year.)
7	Sound Cable Jack converter for Laptop (As by Required)
8	PVC Floor Cord Cover, (Specification: 1. Made from high-grade polyurethane, extremely robust, 2. Tapered design & non-slip treadsforpedestriantraffic,3.Durabilitygivesexceptionalvalue, 4. Fully safety tested)
9	30 Meter Fiber Optic HDMI Cable, (Specification: Type- Video, Length- 30 Meter, Data Transfer Rates- 18 Gbps, Display Resolution (Pixels)- 4K (4096x2160), Feature- GoPro camera,PS4 Pro , Xbox one s, Blu-ray player, DVD, Ultra HD TV, computermonitor,hometheaterProjector,4kProjector,PortSide- 1/ HDMI Male, Side 1 Port Type/ Male, Side 1 Port Name/HDMI, Port Side-2/ HDMI Male, Side 2 Port Type/ Male, Side 2 Port Name/ HDMI, Color- Black, Warranty- 1 Year)
10	Installation Charge

Lot-3: Consumables and Accessories

Sl. No.	Product Specification
1	UPS Battery. Specification:- Type: Rechargeable Sealed Lead Acid Battery. Nominal Voltage:- Minimum: 12V. Nominal Capacity:- Minimum: 7Ah. Weight: Minimum- 2.1 Kg (without packet) . Case Material:- ABS UL94 HB, Option: Flammability resistance of (UL94 V-0). Dimensions:- Length(L)- 151±1 mm, Width (W)- 65±1 mm, Height(H)-94±1mm,OverallHeight(HT)-102±1mm.DesignLife:- Minimum 3 (Three) Years. Warranty:- 1 (One) Year. ChargeRetention at 20 (Degree Celsius):- After 1 Month: At Least 92%, After 3 Month: At Least 90%, After 6 Month: At Least 80%. OperatingTemperatureRange:-Charge-15(DegreeCelsius)to40 (Degree Celsius), Discharge -15 (Degree Celsius) to 50 (Degree Celsius), Storage -15 (Degree Celsius) to 40 (Degree Celsius), Terminal:- F1 Faston Tab 187, F2 Faston Tab 250.
2	Generator Battery (Specification: Model: N-120, Plate:-21, Nominal Voltage:-12V, Nominal Capacity:-120 AH, Warranty:-18 Months, Battery Type:- Generator (Heavy Duty for 500 KVA Generator),
3	Fuel Filter (Primary), Part Number: 10000-59653, FG Wilson
4	Fuel Filter (Secondary), Part Number: 10000-59652, FG Wilson
5	Oil Filter, Part Number: 10000-59645, FG Wilson

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6	Lube Oil (Delvac MX 15W-40), Specification:- ApplicationsRequiring: API CI-4, API CH-4, API SL, API SJ, ACEA E7,Cummins CES 20077, Cummins CES 20076. Has the Following Builder approvals: Mack EO-M Plus, Mack EO-N, MB-Approval228.3, MTU Oil Category 2, RENAULT TRUCKS RLD-2, VOLVO VDS-3. Recommended by Exxonmobil for use in Applications requiring: API CG-4, API CF-4, API CF, ACEA B2,A2 , Cummins CES 20072, Cummins CES 20071, VOLVOVDS-2, Detroit 7SE 270 (4-STROKE CYCLE), Mack EO-M, RENAULT TRUCKS RLD.
7	1KVA Standard Backup Online UPS, (Specification: Type - Online UPS,VoltAmpere(VA)-1000VA,InputVoltage(V)–Minimum- 120V & Maximum- 300V, Output Voltage (V) - Minimum 220V & Maximum-240V,Frequency(Hz)–45~66Hz,TransferRate(ms)- 00ms, Battery(Qty with V & Ah) - 2 Pcs with 12V & 9Ah, Load Capacity (Watt) – Minimum-800W, Back up time(Full load) – Minimum: 15 Minutes, Others - Noise Level - <50(within 1 meter), Power Factor - 1, Type of Wave - Pure Sine wave., Specialty - Alarm - Battery low-voltage, mains abnormal, overload, UPS fault, over temperature protection, Warranty - 1 Year)
8	2KVA Standard Backup Online UPS, (Specification: Type - Online UPS,VoltAmpere(VA)-2000VA,InputVoltage(V)–Minimum- 120V & Maximum- 300V, Output Voltage (V) - Minimum 220V & Maximum-240V,Frequency(Hz)–45~66Hz,TransferRate(ms)- 00ms, Battery(Qty with V & Ah) - 6 Pcs with 12V & 7Ah, Load Capacity (Watt) – Minimum-1800W, Back up time(Full load) – Minimum: 15 Minutes, Others - Noise Level - <50(within 1 meter), Power Factor - 1, Type of Wave - Pure Sine wave., Specialty - Alarm - Battery low-voltage, mains abnormal, overload, UPS fault, over temperature protection/they are ideal for supplying critical systems of up to 2000VA that require high reliability and quality supply with low operating and maintenance costs. Body Material – Metal, Back side output connection - 4 Port, Warranty - 1 Year)

Warranty: 12 Months from the date of installation for the all goods.
Country of Origin : USA/UK/EU/Japan/Australia/Canada/Singapore/Equivalent.