

**Department of Economics
University of Delhi,
Delhi 110007**

Amended - Notice Inviting Tender for Camera and Projection System

Date: 1-June-2016 (Amended 13-June-2016)

Sealed Technical and Commercial bids are invited from reputed authorized dealers for the purchase of the following Projection System:

1. Brief description of the AV requirement at Department of Economics for its Lecture Theatre:

Department of Economics Lecture Theatre has capacity of around 130 students. There is a LCD projector and screen already installed. Also audio system consisting of amplifier, mike and speakers are in place. The current requirement is to place a high resolution camera to focus the green board where teacher writes with chalk and project it to two short throw projectors placed midway on both sides of hall so that students sitting on back rows of hall can see what teacher writes on board, which otherwise is not visible from the back rows of the hall. The dimensions of the Lecture Theatre and Green Board are given below:

Dimensions of Room:

Length: 60 Feet

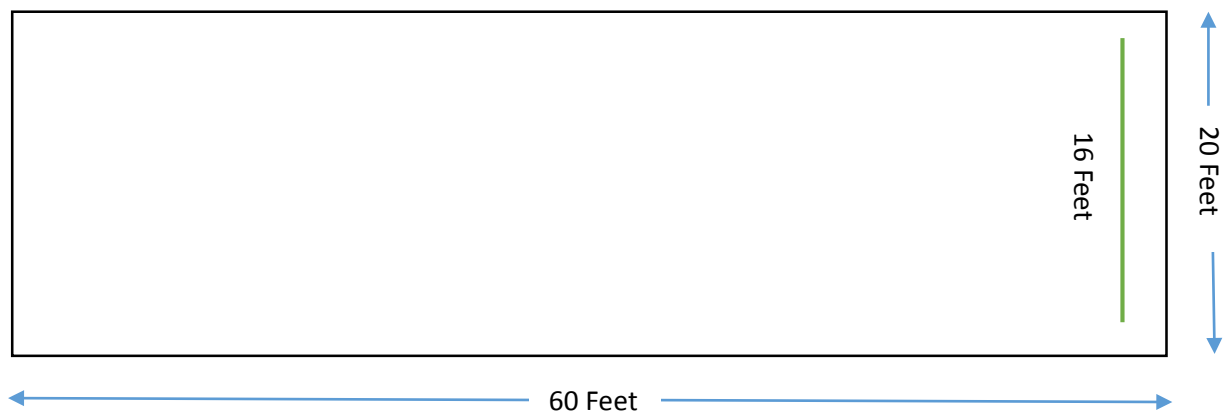
Width: 20 Feet

Height: 10 Feet till False Ceiling (12 Feet till Ceiling)

Dimensions of Green Board:

Width: 16 Feet

Height: 4 Feet



2. Technical Specifications and Technical bid format for the AV equipment:

S. No.	Item	Technical Specifications	Model and Make	Quantity
1	Full HD, 1080p, 30X Optical Zoom PTZ Camera	Please see Annexure		1
2.	Short Throw Projector	3000 Lumens, 3LCD Chip Technology, WXGA (1280x800 dots), Throw Ratio 0.46:1, Contrast Ratio 3000:1, Lamp Life 4000H / 6000H / 10000H (Lamp mode: High / Standard / Low), Aspect ratio: 16:10 Input A: Mini D-sub 15-pin (female), Audio input connector: Stereo mini jack Input B: Mini D-sub 15-pin (female), Audio input connector: Stereo mini jack Input C: HDMI input connector: HDMI 19-pin, HDCP support Audio input connector: HDMI audio support S VIDEO IN S video input connector: Mini DIN 4-pin, Audio input connector: Pin jack (x2) (shared with VIDEO IN) VIDEO IN Video input connector: Pin jack, Audio input connector: Pin jack (x2) (shared with S VIDEO IN) Control signal input/output, Others: RS-232C connector: D-sub 9-pin (male) LAN connector: RJ-45, 10BASE-T/100BASE-TX USB: Type-A, Type-B Microphone input: Mini jack 16 Watt Speaker		2
3.	Projection Screen 5x7 feet Motorised			2
4.	Wall Mount for Projector			2
5.	HDMI Video Splitter			1
6.	DVD Recorder with HDD (320 GB)and USB Terminal	Please see Annexure		1
7.	Cables and Connectors	As per the installation requirement		As required
8.	Installation	Whole setup installation charges		

3. Price / Commercial bid for Supply and Installation of the AV Equipment

S. No.	Item	Quantity	Model and Make	Unit Price	Total Price (Qty*Unit Price)	Tax	Total Price including Taxes
1	Full HD, 1080p, 30X Optical Zoom PTZ Camera	1					
2.	Short Throw Projector	2					
3.	Projection Screen 5x7 feet Motorised	2					
4.	Wall Mount for Projector	2					
5.	HDMI Video Splitter	1					
6.	DVD Recorder with HDD (320 GB)and USB Terminal	1					
7.	Cables and Connectors as per requirement	As required					
8.	Installation						
Grand Total							

4. Conditions, eligibility and enclosures to be submitted in the technical bid:

1. The bidder must enclose an Authorization Certificate from Original Equipment Manufacturer (OEM) duly signed in blue ink with OEM seal.
2. The bidder should be registered with revenue authorities (Copies of PAN Card, Service Tax registration, VAT registration etc. should be enclosed).
3. The bidder should have sound financial standing and have certified balance sheets and income tax returns.
4. The bidder must submit an undertaking on its letter head that they have not been blacklisted by any State Government/Central Government/Public Sector Undertaking/university in India in last 3 years
5. Vendor office must be located in Delhi or NCR.

Technical and Commercial bids must be submitted in separate envelopes as per the format given above. Mention “Technical Bid” or “Commercial Bid” on the top of the envelope. Write our reference number **(DU/Economics/June-2016/1)** on both of them. Both the bids should reach the undersigned on or before extended last date of **27th June 2016 till 5 PM.**

Aditya Bhattacharjea
Professor and Head
Department of Economics
Delhi School of Economics
University of Delhi
Delhi-110007

Annexure

Camera Specifications	Detail
Image Device	1/2.8 Exmor CMOS
Image Sensor	2.1 Megapixels
Lens	30x Optical/12x Digital Zoom Lens Focal Length - f=4.3 mm (wide) to 129 mm (tele) Focal Length - F1.6 to 4.7
Minimum Object Distance	10mm (wide end) / 1200mm (tele end)
Minimum Illumination (50IRE)	1.4 lx (50IRE, F1.6, 30fps)
Shutter Speed	1/1 to 1/10000 sec (59.94 Hz system) 1/1 to 1/10000 sec (50 Hz system)
Pan Angle/Speed	Angle: +/- 170 degrees Speed: 100 degrees /sec
Tilt Angle/Speed	Angle: +90 degrees / -20 degrees Speed: 90 degrees / sec
Horizontal Viewing Angle	65 degrees (wide)
Preset Positions	16
S/N Ratio	50 dB
Video Output	HDMI
Camera Control Interface	RJ-45 / RS-232C / RS-422
Camera Mounting Options	Both ceiling mount and desktop
OEM should have their own service centre across PAN India for better service support	

DVD Recorder Specifications		
Recording Format	DVD-RAM	DVD Video Recording Format
	DVD-R, DVD-R DL, DVD-RW	DVD-Video Format
	Built-in Hard Disk Capacity [GB]	320
Video	Recording System	MPEG2 (Hybrid VBR)
	Component Video Output(Y,PB,PR)	yes
Audio	Recording System	Dolby Digital 2ch, Linear PCM (XP mode)
USB Terminal	USB Standard	USB2.0 High Speed
SD Card Slot	SD Memory Card Slot	yes
Television System	Channel Coverage.	[PAL-DK, SECAM-DKK1] OIRT VHF:R1-R12 UHF:21-69, CATV:44MHz-470MHz [PAL-BGH, SECAM-BG] CCIR VHF:E2-E12,UHF:E21-E69 CATV:S01-S05, M1-M10, U1-U10, S21-S41 [PAL-I]Hong Kong UHF:21-69 [PAL-D]China VHF:1-12 UHF:13-57, CATV:Z1-Z35
VIDEO / AUDIO	DV input	yes
	HDMI OUTPUT:576i, 576p, 720p, 1080i, 1080p	yes
	VIERA Link	yes (HDAVI Control 4)