

Pakistan Museum of Natural History
Garden Avenue, Shakarparian, Islamabad

TENDER NOTICE

Pakistan Museum of Natural History, Islamabad invites sealed bids from reputable authorized dealers/distributors/Firms registered with Income Tax, Sales Tax having names in Active Taxpayers List (ATL) for procurement equipment as per detail given below;

S. No.	Description of items	Quantity	Opening Date & Time
Items to be purchased on F.O.R Islamabad Basis			
<i>Specification is available in Tender Documents</i>			
1.	Binocular Telescope CPC Deluxe 1100 HD or Equivalent as per specification (Required for Islamabad Space Observatory)	01	20-12-2021
	Optional: 1. 1.25" Filter Kit (06 pieces/set) 2. 1.25" Variable Polarizing Filter	2	Closing at 11:00 a.m.
	3m steel/fiberglass automated Dome with all required Accessories (3000 mm automated dome 6mm polyester glass laminated 1000mm shutter width 24000 mm dome height 2760mm diameter of the base)	1	Opening at 11:30 a.m.
2.	16 inch Ritchey Chretien or 16 inch Meade Telescope (Lunar tracking planetary viewing Satellite tracking asteroid tracking) or Equivalent as per specification.	1	
	Optional: i Optron Electronic Focuser	01	
3.	HP Desktop Computer Type Intel Core i7 Ram 8GB, Hard Disk Capacity 1TB Processor speed 3.6 GHz with Graphic Card or Equivalent Latest Generation	01	
4.	60 inch 4K LED Screen (60" Eco Star or equivalent)	01	
5.	Canon EOS 80D DSLR Camera with T ring Adopter and Lens or Equivalent	01	

6.	UPS (1KW) with Battery	01	
7.	Movable Planetarium 7.5m Bubble Planetarium Inflatable dome and projection system	01	

Tender/RFP documents, containing detailed specifications and terms and conditions, method of procurement, procedure for submission of bids, evaluation criteria, rejection of bids, performance guarantee, etc. can be obtained from the office of the undersigned free of cost on or before 20-12-2021 during office hours. Single Stage Two Envelop Procedure will be used for open competitive bidding.

The sealed bids, prepared in accordance with the instructions in Tender/RFP documents, should reach to the undersigned by **20-12-2021 by 11:00 a.m.** Received proposals (Technical only) will be opened on the same day at **11:30 a.m. in PMNH Committee Room.**

Tender documents (free of cost) can be obtained from the undersigned during office hrs.

Mirza Imtiaz Baig
Assistant Director (Admin)
Pakistan Museum of Natural History
Garden Avenue, Shakarparian, Islamabad
Phone No. 051-9249239, 051-9249252

Government of Pakistan
Pakistan Museum of Natural History
Garden Avenue, Shakarparian, Islamabad



Bidding Documents
PSF/Sc-Pr/997/2020-21

SUPLY ON F.O.R BASIS

F.O.R Term & Conditions

2021-2022

Director General
Pakistan Museum of Natural History
Garden Avenue, Shakarparian, Islamabad
Phone No. 051-9249239, 051-9249241

Instructions to the bidders

1. “Single Stage Two Envelop Procedure” procurement method will be used for open competitive bidding. Proposals and bids should be submitted in two separate envelopes with the titles as “Technical” and “Financial” proposals, which should be enclosed in a single envelop with clear heading “Proposal/Bid for procurement of Equipment”. Technical proposals should contain detailed specifications and technical parameters, and other relevant information of the equipment, as per requirements laid down in this RFP. Financial proposals should accompany a bid security equivalent to two per cent (2%) of the total bid amount in the form of Pay Order / Demand Draft in favor of “Pakistan Museum of Natural History”, otherwise the proposals are liable to be rejected. Rates should be valid for 90 days.

2. Sealing of Bid:

The proposal should be prepared in accordance with tender documents and sealed properly and envelopes should be clearly marked as “Technical Proposal” or “Financial Proposal” in legible letters with the tender heading and its closing and opening date and time. If the envelopes is not sealed and marked properly, PMNH will assume no responsibility for the bid’s misplacement.

3. Submission of Bid:

- The bid should be submitted as per given closing date and time advertised in the tender notice. The late bid will not be entertained.
- No bid may be withdrawn in the interval between the deadlines for submission of bids and the expiration of the period of bid validity specified in the bid document. Withdrawal of a bid during this interval may result in the bidder’s forfeiture of its bid security 3% of total cast (earnest money).

4. Opening of Bid:

The technical proposals shall be opened publicly at the tendered date & time in the presence of PSF Authorized Committee and Bidder’s representatives who are present shall be given the attendance sheet evidencing of their presence. In case any holiday is announced by the Govt. of “Force Majure Situation”, the bids will be opened on next working day or as intimated by the PMNH.

No bid shall be rejected at the time of opening of bids, except for the late bids, which shall be returned unopened to the Bidder. During evaluation of the bids, PMNH may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing, and no change in the prices or substance of the bid shall be sought, offered or permitted. If a bid is not substantially responsive to the terms & conditions/particulars of the tender documents, it will be rejected by PMNH and may not subsequently be made responsive by the bidder by correction of the non-conformity. A bid once opened in accordance with the prescribed procedure shall be subject to only those rules, regulation and polices that are in force at the time of issue of notice for invitation of bids.

5. Invitation to Bid:

Item No. 01: SPECIFICATION OF BINOCULAR TELESCOPE

S. No.	Technical Specification	QTY																																
1.	Binocular Telescope CPC Deluxe 1100HD or Equivalent	01																																
	<p>Should have following specification</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;">Aperture</td> <td>279.4mm (11")</td> </tr> <tr> <td>Focal Length</td> <td>2800mm (110")</td> </tr> <tr> <td>Focal Retio</td> <td>f/10</td> </tr> <tr> <td>Focal Length of Eyepiece 1</td> <td>23 mm - 2"</td> </tr> <tr> <td>Magnification of Eyepiece</td> <td>(122x)</td> </tr> <tr> <td>Finderscope</td> <td>9x50mm Finderscope with quick release bracket</td> </tr> <tr> <td>Star Diagonal</td> <td>2" with 1.25" adapter</td> </tr> <tr> <td>Optical Tube</td> <td>Aluminum</td> </tr> <tr> <td>Highest Useful Magnification</td> <td>660x</td> </tr> <tr> <td>Lowest Useful Magnification</td> <td>40x</td> </tr> <tr> <td>Limiting Stellar Magnitude</td> <td>14</td> </tr> <tr> <td>Resolution (Rayleigh)</td> <td>0.50 arc seconds</td> </tr> <tr> <td>Resolution (Dawes)</td> <td>0.42 arc seconds</td> </tr> <tr> <td>Light Gathering Power (Compared to human eye)</td> <td>1593x</td> </tr> <tr> <td>Secondary Mirror Obstruction</td> <td>95mm (3.75")</td> </tr> <tr> <td>Secondary Mirror Obstruction by Diameter.</td> <td>34%</td> </tr> </table>	Aperture	279.4mm (11")	Focal Length	2800mm (110")	Focal Retio	f/10	Focal Length of Eyepiece 1	23 mm - 2"	Magnification of Eyepiece	(122x)	Finderscope	9x50mm Finderscope with quick release bracket	Star Diagonal	2" with 1.25" adapter	Optical Tube	Aluminum	Highest Useful Magnification	660x	Lowest Useful Magnification	40x	Limiting Stellar Magnitude	14	Resolution (Rayleigh)	0.50 arc seconds	Resolution (Dawes)	0.42 arc seconds	Light Gathering Power (Compared to human eye)	1593x	Secondary Mirror Obstruction	95mm (3.75")	Secondary Mirror Obstruction by Diameter.	34%	
Aperture	279.4mm (11")																																	
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Secondary Mirror Obstruction by Diameter.	34%																																	

Optical coating	Starbright XLT
Secondary Mirror Obstruction by Area	12%
Optical Tube Length	610mm (24")
Optical Tube Diameter	312.42mm (12.3")
Mount Type	Computerized Altitude-Azimuth Dual Fork Arm
Height adjustment range (includes mount and tripod)	1397mm - 1778mm (55" - 70")
Tripod leg material	Stainless Steel
Tripod leg diameter	50.8mm (2")
Accessory Tray	Yes
Slew Speed	9 slew speeds - max speed 5°/second
Tracking Rates	Sidereal, Solar and Lunar
GPS	Internal 16 channel
Number of Auxiliary ports	2 Aux ports (Hand Control can use any of the Aux ports)
Auto guide port	Yes

S. No.	Technical Specification	QTY
	USB Port	Yes, on hand control
	Power Requirements	12 VDC-1.5A
	Motor Drive	DC. servo motors
	Alignment Procedures	Sky Align, Auto Two-Star Align, Two-Star Align, Solar System Align, EQ North Align &

	EQ South Align
Periodic Error Correction:	Yes
Computerized Hand Control	2 line x 18 character backlit Liquid Crystal Display, 19 LED backlit buttons, USB 3.0 port for PC connection
Software	Windows base portal application software should provide Knowledge in user's hands to help in observing our Solar System and other celestial objects. The software should provide a guided tour of our Solar System's past, present, and future, and may even model exactly how the night sky will Appear from anywhere on Pakistan.
Manual	Instruction manual for installation, operation and maintenance in English language.
Warranty	At least one year after installation
Installation	Installation must be done by the telescope supplier.
Training	Training on telescope operation and maintenance

Note:

A video based presentation/demonstration of the offered computerized telescope must be given by the bidder before placing supply order.

Item No. 02: SPECIFICATION OF PHOTRON 16 INCH TRUSS TUBE RC TELESCOPE (RC16-TRUSS) or Equivalent

S. No.	Technical Specification	QTY																														
1.	<u>PHOTRON 16 INCH TRUSS TUBE RC TELESCOPE (RC16-TRUSS)</u>	01																														
	<p>Should have following specification</p> <table border="1"> <tr> <td>Optical Design</td> <td>Ritchey-Chretien</td> </tr> <tr> <td>Clear Aperture</td> <td>16" (406mm)</td> </tr> <tr> <td>Focal Length</td> <td>3250mm</td> </tr> <tr> <td>Focal Ratio</td> <td>f/8</td> </tr> <tr> <td>Focuser</td> <td>10:1 Crayford dual-speed</td> </tr> <tr> <td>Focuser size</td> <td>3"</td> </tr> <tr> <td>Dovetail Bar</td> <td>Losmandy-style</td> </tr> <tr> <td>Mounting Bar (Top)</td> <td>Losmandy-style</td> </tr> <tr> <td>Tube material</td> <td>Carbon truss tube</td> </tr> <tr> <td>Tube Length</td> <td>1114mm</td> </tr> <tr> <td>Tube Weight</td> <td>93 lbs</td> </tr> <tr> <td>OTA Primary Mirror Cooling Fan</td> <td>Yes (three built-in fan, with battery holder)</td> </tr> <tr> <td>Other Accessories</td> <td>1" long extension tube X2 2" long extension tube X1</td> </tr> <tr> <td>Gross Weight</td> <td>127 lbs</td> </tr> <tr> <td>Warranty</td> <td>One year limited</td> </tr> </table>	Optical Design	Ritchey-Chretien	Clear Aperture	16" (406mm)	Focal Length	3250mm	Focal Ratio	f/8	Focuser	10:1 Crayford dual-speed	Focuser size	3"	Dovetail Bar	Losmandy-style	Mounting Bar (Top)	Losmandy-style	Tube material	Carbon truss tube	Tube Length	1114mm	Tube Weight	93 lbs	OTA Primary Mirror Cooling Fan	Yes (three built-in fan, with battery holder)	Other Accessories	1" long extension tube X2 2" long extension tube X1	Gross Weight	127 lbs	Warranty	One year limited	
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Gross Weight	127 lbs																															
Warranty	One year limited																															

Features

Coma free, chromatic aberration-free, spherical aberration-free optics

- 16" (406mm) optical aperture
- 3250mm focal length
- f/8 focal ratio
- Fixed primary
- Low thermal expansion quartz mirrors
- 3" Dual-speed Crayford focuser 01
- Optional iOptron Electronic Focuser 01

Note:

A video based presentation/demonstration of the offered Photron 16 inch Truss Tube RC Telescope (Rc16-Truss) must be given by the bidder before placing supply order.

Item No. 03: SPECIFICATION OF HP DESKTOP COMPUTER TYPE INTEL or Equivalent CORE i7 LATEST GENERATION

S. No.	Technical Specification	QTY																		
1.	<u>HP DESKTOP COMPUTER TYPE INTEL or Equivalent CORE I7 LATEST GENERATION</u>	01																		
	<p>Should have following specification</p> <table border="1" data-bbox="237 716 1398 1383"> <tbody> <tr> <td data-bbox="237 716 764 785">Processor Type</td> <td data-bbox="764 716 1398 785">Intel Core i7</td> </tr> <tr> <td data-bbox="237 785 764 854">Processor Speed</td> <td data-bbox="764 785 1398 854">3.6 GHz or Higher</td> </tr> <tr> <td data-bbox="237 854 764 924">RAM size</td> <td data-bbox="764 854 1398 924">8 GB</td> </tr> <tr> <td data-bbox="237 924 764 993">Hard drive size</td> <td data-bbox="764 924 1398 993">1 TB</td> </tr> <tr> <td data-bbox="237 993 764 1062">WiFi Support</td> <td data-bbox="764 993 1398 1062">Yes</td> </tr> <tr> <td data-bbox="237 1062 764 1131">Keyboard, Mouse, DVD Writer</td> <td data-bbox="764 1062 1398 1131">Yes</td> </tr> <tr> <td data-bbox="237 1131 764 1201">LED Screen</td> <td data-bbox="764 1131 1398 1201">19 Inches</td> </tr> <tr> <td data-bbox="237 1201 764 1270">Graphic Card</td> <td data-bbox="764 1201 1398 1270">Latest</td> </tr> <tr> <td data-bbox="237 1270 764 1383">Warranty</td> <td data-bbox="764 1270 1398 1383">Three (3) Years Parts and Labour warranty for all components on site.</td> </tr> </tbody> </table>	Processor Type	Intel Core i7	Processor Speed	3.6 GHz or Higher	RAM size	8 GB	Hard drive size	1 TB	WiFi Support	Yes	Keyboard, Mouse, DVD Writer	Yes	LED Screen	19 Inches	Graphic Card	Latest	Warranty	Three (3) Years Parts and Labour warranty for all components on site.	
Processor Type	Intel Core i7																			
Processor Speed	3.6 GHz or Higher																			
RAM size	8 GB																			
Hard drive size	1 TB																			
WiFi Support	Yes																			
Keyboard, Mouse, DVD Writer	Yes																			
LED Screen	19 Inches																			
Graphic Card	Latest																			
Warranty	Three (3) Years Parts and Labour warranty for all components on site.																			

Item No. 04: SPECIFICATION OF 60 INCH 4K LED SCREEN (60" ECOSTAR OR EQUIVALENT)

S. No.	Technical Specification	QTY												
1.	60 inch 4K LED Screen (60" EcoStar or equivalent)	01												
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" data-bbox="237 457 1395 527">Should have following specification</td> </tr> <tr> <td data-bbox="237 527 727 596">Screen Size</td> <td data-bbox="727 527 1395 596">60 inch or higher</td> </tr> <tr> <td data-bbox="237 596 727 665">Brand</td> <td data-bbox="727 596 1395 665">Premium brand</td> </tr> <tr> <td data-bbox="237 665 727 735">Resolution</td> <td data-bbox="727 665 1395 735">4K</td> </tr> <tr> <td data-bbox="237 735 727 848">Connectivity</td> <td data-bbox="727 735 1395 848">2 X HDMI, 2 X USB, 1 X, 1 X LAN and Wi-Fi enabled</td> </tr> <tr> <td data-bbox="237 848 727 917">Warranty</td> <td data-bbox="727 848 1395 917">3 Years</td> </tr> </table>	Should have following specification		Screen Size	60 inch or higher	Brand	Premium brand	Resolution	4K	Connectivity	2 X HDMI, 2 X USB, 1 X, 1 X LAN and Wi-Fi enabled	Warranty	3 Years	
Should have following specification														
Screen Size	60 inch or higher													
Brand	Premium brand													
Resolution	4K													
Connectivity	2 X HDMI, 2 X USB, 1 X, 1 X LAN and Wi-Fi enabled													
Warranty	3 Years													

Item No. 05: SPECIFICATION OF CANON EOS 80D DSLR CAMERA WITH T RING ADOPTER AND LENS)

S. No.	Technical Specification	QTY																
1.	Canon EOS 80D DSLR Camera with T ring Adopter and Lens or Equivalent	01																
	<p>Should have following specification</p> <p style="text-align: center;">Type of Camera</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Type</td> <td>Digital, AF/AE single-lens reflex camera with built-in flash</td> </tr> <tr> <td>Recording Media</td> <td>SD, SDHC and SDXC Memory Cards SD speed class compatibility. UHS speed class compatibility. High-speed writing is supported when a UHS-I-compatible SD card is used. Compatible with Eye-Fi Cards. Multimedia cards (MMC) cannot be used (card error will be displayed).</td> </tr> <tr> <td>Image Format</td> <td>Approx. 22.5mm x 15.0mm (APS-C)</td> </tr> <tr> <td>Compatible Lenses</td> <td>Canon EF Lenses (including EF-S lenses, excluding EF-M lenses)</td> </tr> <tr> <td>Lens Mount</td> <td>Canon EF Mount</td> </tr> <tr> <td colspan="2" style="text-align: center;">Image Sensor</td> </tr> <tr> <td>Type</td> <td>CMOS Sensor</td> </tr> <tr> <td>Effective Pixels</td> <td>Approx. 24.2 megapixels</td> </tr> </table>	Type	Digital, AF/AE single-lens reflex camera with built-in flash	Recording Media	SD, SDHC and SDXC Memory Cards SD speed class compatibility. UHS speed class compatibility. High-speed writing is supported when a UHS-I-compatible SD card is used. Compatible with Eye-Fi Cards. Multimedia cards (MMC) cannot be used (card error will be displayed).	Image Format	Approx. 22.5mm x 15.0mm (APS-C)	Compatible Lenses	Canon EF Lenses (including EF-S lenses, excluding EF-M lenses)	Lens Mount	Canon EF Mount	Image Sensor		Type	CMOS Sensor	Effective Pixels	Approx. 24.2 megapixels	
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Lens Mount	Canon EF Mount																	
Image Sensor																		
Type	CMOS Sensor																	
Effective Pixels	Approx. 24.2 megapixels																	
	Total Pixels	Approx. 25.8 megapixels																
	Pixel Unit	Approx. 3.72 μm square																
	Aspect Ratio	3:2 (Horizontal: Vertical)																
	Color Filter System	RGB primary color filters																
	Low Pass Filter	Fixed position in front of the image sensor																
	Dust Removal Feature	(1) Self Cleaning Sensor Unit <ul style="list-style-type: none"> • Removes dust adhering to the low-pass filter. • Self-cleaning can be done automatically when the power is 																

		<p>turned on or off.</p> <p>Manual cleaning also possible.</p> <p>(2) Dust Delete Data acquisition and appending</p> <ul style="list-style-type: none"> • The coordinates of the dust adhering to the low-pass filter are detected by a test shot and appended to subsequent images. • The dust coordinate data appended to the image is used by the EOS software to automatically erase the dust spots. <p>(3) Manual cleaning</p>	
Recording System			
	Recording Format	Design Rule for Camera File System 2.0 and EXIF 2.3	
	Image Format	<p>Still Image: JPEG, RAW (14 bit Canon Original)</p> <p>Video: MOV (Movie: MPEG4 AVC/H.264*; Audio: Linear PCM), MP4 (Movie: MPEG4 AVC/H.264*; Audio: AAC)</p> <p>* Variable (averaged) bit rate</p> <p>3:2 Aspect Ratio</p> <p>Large: 24.0 Megapixels (6000 x 4000)</p> <p>Medium: Approx. 10.6 Megapixels (3984 x 2656)</p> <p>Small 1: Approx. 5.9 Megapixels (2976 x 1984)</p>	
Autofocus			
	Focusing Mode	<p>1. Autofocus</p> <p>a. One-Shot AF</p> <p>b. Predictive AI Servo AF (AI Servo AF II)</p> <p>c. AI Focus AF</p> <p>i. Switches between One-Shot AF and AI Servo AF automatically.</p> <p>2. Manual focus</p>	
	AF Assist Beam	<p>Intermittent firing of built-in flash</p> <p>Effective range:</p> <p>Center: Approx. 13.1 ft. / 4.0m</p> <p>Periphery: Approx. 11.5 ft. / 3.5m</p> <p>With an EOS-dedicated Speedlite attached, the Speedlite's AF-assist beam is emitted instead.</p>	
Live View Functions			
	Focusing	<p>1. Dual Pixel CMOS AF</p> <ul style="list-style-type: none"> • Dual Pixel CMOS AF is possible with all EF and EF-S lenses. 	

		<ul style="list-style-type: none"> • Contrast AF is not provided. 2. Manual focus • Magnify the image by 5x or 10x and focus manually. * AE lock possible. The active metering timer can be changed. 	
Video Shooting			
	File Format	<p>MOV: Movie: MPEG-4 AVC/H.264 * Variable (average) bit rate Audio: Linear PCM</p> <p>MP4: Movie: MPEG-4 AVC/H.264 * Variable (average) bit rate Audio: AAC</p>	
Interface			
	USB Terminal	<p>Hi-Speed USB (USB 2.0)</p> <ul style="list-style-type: none"> • For PC communication • For GP-E2 connection • For Connect Station connection 	
	Video Out Terminal	<p>HDMI Type C (Resolution switches automatically)</p> <ul style="list-style-type: none"> • Video is not displayed unless the video format appropriate for the connected TV set, [NTSC] or [PAL], is set. 	
Power Source			
	Battery	<p>Battery Pack LP-E6N (or LP-E6) x 1</p> <ul style="list-style-type: none"> • When the battery grip is used, two battery packs (LP-E6N or LP-E6) can be installed. <p>Also usable with six AA/R6 batteries.</p>	
	Battery Check	<p>Automatic battery check when the power switch is turned ON. Displayed in 6 levels.</p> <ul style="list-style-type: none"> • Battery level displayed on LCD panel and in viewfinder. • Displayed in four levels with the battery grip with AA/R6 batteries. 	
	Power Saving	<p>Power turns off after the set time (1, 2, 4, 8, 15 or 30 min.) of non-operation elapses.</p>	
	Date/Time Battery	<p>Built-in secondary battery Maintains date/time for about 3 months when fully charged</p> <ul style="list-style-type: none"> • Recharge time: approx. 8 hr. 	

		<input type="checkbox"/> To become capable to maintain the right date/time for one month after main battery power depletion.	
	Start-up Time	Approx. 0.16 sec. (Based on CIPA testing standards) • Excluding the recognition time for genuineness (genuine Canon battery) at the installation of the battery.	
Operating Environment			
	Working Temperature Range	32–113°F/0–45°C	
	Working Humidity Range	85% or less	

Item No. 06: SPECIFICATION OF UPS (1KW) WITH BATTERY

S. No.	Technical Specification	QTY																
1.	UPS (1KW) with Battery	01																
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" data-bbox="237 415 1395 485">Should have following specification</td> </tr> <tr> <td data-bbox="237 485 607 554">Power Capacity in Watts</td> <td data-bbox="607 485 1395 554">≥ 1 kW</td> </tr> <tr> <td data-bbox="237 554 607 623">Technology</td> <td data-bbox="607 554 1395 623">Digital charger /Online Double Conversation</td> </tr> <tr> <td data-bbox="237 623 607 693">System Efficiency</td> <td data-bbox="607 623 1395 693">≥ 93%</td> </tr> <tr> <td data-bbox="237 693 607 806">Transfer Time (powerfailure)</td> <td data-bbox="607 693 1395 806">Zero, Online conversion</td> </tr> <tr> <td data-bbox="237 806 607 875">Backup Time</td> <td data-bbox="607 806 1395 875">Standard</td> </tr> <tr> <td data-bbox="237 875 607 989">Protection</td> <td data-bbox="607 875 1395 989">Overload, Short circuit, Temperature, Power High/Low, Batt low</td> </tr> <tr> <td data-bbox="237 989 607 1098">Warranty</td> <td data-bbox="607 989 1395 1098">1 Years Standard Warranty of UPS and 1 Year Warranty of Battery</td> </tr> </table>	Should have following specification		Power Capacity in Watts	≥ 1 kW	Technology	Digital charger /Online Double Conversation	System Efficiency	≥ 93%	Transfer Time (powerfailure)	Zero, Online conversion	Backup Time	Standard	Protection	Overload, Short circuit, Temperature, Power High/Low, Batt low	Warranty	1 Years Standard Warranty of UPS and 1 Year Warranty of Battery	
Should have following specification																		
Power Capacity in Watts	≥ 1 kW																	
Technology	Digital charger /Online Double Conversation																	
System Efficiency	≥ 93%																	
Transfer Time (powerfailure)	Zero, Online conversion																	
Backup Time	Standard																	
Protection	Overload, Short circuit, Temperature, Power High/Low, Batt low																	
Warranty	1 Years Standard Warranty of UPS and 1 Year Warranty of Battery																	

Item No. 07: SPECIFICATION OF 7 METER BUBBLE PLANETARIUM DOME AND PROJECTION SYSTEM

S. No.	Technical Specification			QTY
1.	7 Meter Bubble Planetarium Dome and Projection System			01
Should have following specification				
Dome Size		7 Meter		
Height		13.5 ft.		
Diameter		22 ft.		
Capacity		50+		
SYSTEM INCLUDES		SPECIFICATIONS	FEATURES	SOFTWARE HIGHLIGHTS
Each Digital Starlab Projection System Includes		Projection Specifications	Full Dome Images With 360 Degrees Of High-Definition Output	Starry Night Small Dome™ Software Highlights
<ul style="list-style-type: none"> • Projector with Custom Fisheye Lens and Remote Control • Case/Portable Stand • Laptop Computer with 3-year AppleCare Protection or extended warranty • Starry Night Small Dome™ Software • Speakers • 12 National Standards-based Lessons (adaptable for any grade as well as public use) • 1-year Warranty on 		<ul style="list-style-type: none"> • Custom, contrast-enhancing fisheye lens Our custom designed lens does not distort the star shape near the horizon, allowing for accurate sky images. Our lens is also designed to prevent the “rainbow” effect common at the horizon using other lenses. Our lens projects at 190 degrees, unlike the 155 degree projection angle of some 	<ul style="list-style-type: none"> • A compact, manually-operated planetarium projector with custom fisheye lens (patent pending) designed to produce the best quality starfield images of any projector in its price range • Full Dome Coverage – a 190° hemisphere 	<ul style="list-style-type: none"> • Software is a scaled down version of the powerful package used by full scale, fixed planetariums. No other portable planetarium in the world is able to offer a software package with this level of power! • Complete 3D

	<p>All Computer and projector come with three year warranties.</p> <ul style="list-style-type: none"> • Lifetime technical support from Science First 	<p>Parts. competing systems. This allows for a far more immersive environment.</p> <ul style="list-style-type: none"> • Resolution – 1200 pixel diameter image size = full high definition projection across the dome interior. This resolution is among the best to be found on any planetarium system. • Brightness – 4000 ANSI Lumens <p>Digital StarLab features a custom fisheye lens (patent pending) capable of depicting an accurate, high-contrast, simulated night sky with the capacity to explore a multitude of motions and displays eliminating the need for additional slide projectors, video projectors, sound systems or computers. Covering a full 190° on the dome, the small bright stars remain spherical right down to the horizon. Its superior brightness makes star images even more realistic. There are no cutouts or blind spots along the horizon. The projector is compact</p>	<p>down to a 36" eye-level horizon</p> <ul style="list-style-type: none"> • Powered by customized Starry Night Small Dome™ software based on the user-friendly, point-and-click, Spitz Starry Night Dome™ software on a laptop computer • Laptop can be either Mac or Windows, depending on preference. Unlike other systems, the user does not have to learn linux. • Superior contrast and star shape, 16 million colors with minimized color aberration • Beautifully realistic deep sky objects, planets and moons, plus visually realistic star projections at the horizon with undistorted star shapes 	<p>Hipparcos, Tycho 2 and database of 16 million stars</p> <ul style="list-style-type: none"> • Thousands of famous deep space objects with detailed descriptions from Messier and Caldwell catalogs, Herschel catalog of 400 deep sky objects, and corrected NGC/IC catalogs with over 13,000 deep sky objects • Comprehensive database of known satellites, comets, asteroids, meteor showers, and extra-solar planets • Display of planets and all known solar system moons as quality textured, accurately placed 3D objects • Accurate annual motion of planets, sun and moons over a +/- 100,000 year span • Constellation 	
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		<p>and lightweight and is therefore easily transported and/or stored. The lens is rigidly locked in place by a strong aluminum mounting system. Additionally, the lens is adjustable via a collection of set screws. This allows the alignment and focus to be very precisely dialed into position, and then locked into place. We do all of this for you, so all you have to do is teach.</p>	<p>(1:1 star aspect ratio)</p> <ul style="list-style-type: none"> • An easy-to-follow method of navigating the sky (HTML-based) that allows users to determine their level of interactivity • The ability to display slides or movies to complement the curriculum • Available separately or as part of a complete system including dome and accessories • Projector is built with a heavy frame and metal components, making it extremely durable. This contrasts with the lighter, plastic projectors used by some other systems 	<p>overlays, equatorial, galactic and ecliptic grids</p> <ul style="list-style-type: none"> • Automatic navigation to any selected planet, moon, comet, asteroid or satellite • Customizable high-resolution 360-degree panoramas • “Find” command to locate any celestial object • Software will “speak” the names of hard to pronounce bodies • Can use the internet to interface with Live Sky, Google Earth, and automatically update positions of bodies. • Split menus, allowing the program to run on the projector while the computer is used for other things. For example, you could start a simulation, then use the 	
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				<p>internet to look up the answer to a question a student might have posed. The teacher is the only person aware of this process</p> <ul style="list-style-type: none"> • Compatible with Starry Night desktop versions 	
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TERM & CONDITIONS FOR F.O.R, ISLAMABAD BASIS

1. **Delivery of Stores:** Stores is required on F.O.R Islamabad basis at PMNH, Islamabad within one month from the date of contract on free delivery to consignee basis, including all Taxes and other charges livable, if any
2. **Terms & Conditions:** The tenderer is invited for the supply of goods as per given specification.
3. **Bidding Procedures: Single-stage two envelopes i.e. Technical and Financial.**

The bid submitted by the bidder shall comprise of two envelopes submitted simultaneously, one containing only the **Technical Proposal** and the other one **Financial Proposal**.

- **Technical Proposal:** Complete specification of the quoted item on the firm's letterhead with copies of NTN and GST certificates, copy of Pay order or Bank draft of 3% earnest money in favour of Director General, Pakistan Museum of Natural History Islamabad.
- **Financial Proposal:** Price proposal/Quotation on the firm's letterhead, Original Pay order of 3% earnest money in favour of Director General. Pakistan Museum of Natural History Islamabad.

4. TERMS & CONDITIONS:

- i. The bids will be evaluated as per specifications of the required equipment as laid down in the tender document. The bids which will not be in accordance with the prescribed specifications of the equipment and terms & conditions of tender, will not be entertained.
- ii. Items will have to be delivered within Four (04) month or earlier on receipt of supply order.
- iii. Warranty period of equipment including battery warranty (1/1/1) must be mentioned, which should not be less than one (01) year.
- iv. If any faults/defects occurs in the equipment during the warranty period, it will be replaced/rectified by the Supplier at its own risk & cost.

- v. The bidder must be authorized dealer of the principle manufacturer, please attach MAL (Manufacturer Authorization Letter)/Firm or Company.
- vi. Equipment must be delivered at PMNH, Shakarparian, Islamabad.
- vii. No transportation and carriage charges will be paid for delivery/installation.
- viii. Income Tax & Sales Tax (if any) will be deducted as per Government rules.
- ix. Free services offered after the sale may be indicated.
- x. **The bid with lowest total unit cost conforming to the specifications and other terms and conditions prescribed in tender document shall be considered for placement of Supply Order for procurement.**
- xi. The bidder should be registered with NTN and Sales Tax department and must be appeared on Active Taxpayer List (ATL).
- xii. The payment is linked with the Active Taxpayer status of the suppliers as per FBR database. If supplier is not in ATL, his payment should be withheld till he files his mandatory returns and appears on ATL of FBR.
- xiii. The interested Firms/Parties may submit their sealed bids along with earnest money equivalent to 3% of total cost of the bid in the shape of Bank draft / Pay order (Cheque will not be accepted) in favour of Pakistan Science Foundation, Islamabad. The bid without earnest money shall not be entertained.
- xiv. Bids are liable to be rejected if they are not conforming to the terms, conditions and specifications stipulated in this RFP.
- xv. **The successful bidder has to deposit 10% as performance warranty of the total cost of the supply order, which will be retained till the expiry of the warranty period.**
- xvi. The bidder will be considered as disqualified, if it fails to provide a valid proof of it's after sales service facilities/centers in big cities of Pakistan.
- xvii. PSF reserve the right to increase or decrease the number of items, before issuance of supply order.
- xviii. The warranty should cover repair/replacement of all the parts and accessories including battery within the warranty period.
- xix. **An affidavit to the effect that the firm has not been blacklisted by any govt. /semi govt. /private organization, and there is no litigation against the firm and not any inquiry/investigation in NAB or FIA. And will also provide Integrity Pact.**
- xx. The supplier will have to sign a contract agreement/letter of acceptance with PMNH as per specimen making part of the tender document.
- xxi. **Validity:-** offer should be valid for 90-days from the date of opening of tender.

5. Technical Evaluation Criteria

1. For evaluation of bids "KNOCKED OUT CRITERIA" will be applied. The bids conforming to the specifications and pre-requisite conditions indicated in specifications and evaluation criteria will be considered for further technical evaluation.
2. The technical evaluation of tenders will be carried out by the designated Technical Evaluation Committee of Procuring Agency.
3. The bid must comply with the advertised technical specifications of the quoted single item/ complete package. Incomplete offer will straightaway be rejected.
4. The Manufacturer should have documentary evidence to the effect that they are the original Manufacturer of the quoted product with indication of manufacturing site and its location.
5. Certificate from the manufacturer that the after sales services / backup services shall be provided jointly with the local sole agent and in case of change of local agent, they will provide the after sales services themselves or through newly appointed agent for the period mentioned from the date of commissioning.

6. Installation of equipment shall be the responsibility of the successful bidder. A Certificate from the manufacturer that the installation will be conducted in conformity with the system requirements by following the professional approach be attached.
7. Satisfactory Past performance of the bidder for quoted product.
8. The quoted model of imported product shall be available on the current official website of the manufacturer; otherwise the quoted product shall be considered obsolete/ redundant and will straight away be rejected.
9. Infrastructure for execution of after sales services mentioned by the bidder shall be evaluated for its suitability as per provisions given in specifications and other requirements detailed in the technical specifications of the bidding documents.
10. The firms shall also declare the make, model, country of origin of all accessories to be provided with the equipment.
11. The Procuring Agency has the right to inspect the premises of bidder to inspect the setups ensuring proper after sales services.
12. An affidavit from bidder stating that their firm is not blacklisted by any of the Federal and Provincial Government or organizations of the State/ Central Government in Pakistan.
13. The offer will be considered as responsive if it fully meets the tender requirement and specifications. The offer which will not be as per requirement of tender and specifications is to be declared as non-responsive. The offer which contains the minor deviations from the specifications and the deviations would not have any kind of effect on the quality, efficiency, reliability and durability of products will be declared as substantially responsive, This need to be determined by the Technical Evaluation Committee. The offers which are declared as Responsive and Substantially Responsive will be considered as equivalent for the onward proceedings of tender.

6. Financial proposals would be evaluated as follows:

1. After technical evaluation is completed, the Procuring Agency shall notify the date, time and location for opening of the financial proposals. Bidders' attendance at the opening of financial proposals is optional.
2. ii) Financial proposals shall be opened publicly in the presence of the bidders' representatives who choose to attend. The name of the bidders shall be read aloud. The financial proposal of the technically responsive bidders shall then be inspected to confirm that they have remained sealed and unopened (financial proposals of technically non-responsive Bidders shall be returned unopened). These financial proposals shall be then opened, and the total prices read aloud and recorded.
3. Incomplete bid shall stand rejected. All items described in the technical proposal must be priced in financial proposal. Items described in the technical proposal but not priced, shall be assumed to be included in the price of other items.
4. Minor oversight, clerical mistakes, other minor inconsistencies that do not alter the substances of the financial bid may be corrected by the Procuring Agency. When correcting computation error in case of discrepancy between a partial amount and the total amount or between the words and figures, the formers will prevail.

5. The bidders will quote the Price Schedules. The total price of the system will be calculated by converting the price to single currency (Pak Rs.) on the rate of date of opening of Financial Proposal; in case of import of item.
6. The lowest responsible bidder will be declared with standard accessories. The price of optional item will not be considered while establishing the lowest bid.
7. **Arbitration and Resolution of Disputes**
 1. The Procuring Agency and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.
 2. If, after thirty (30) days from the commencement of such informal negotiations, the Procuring Agency and the Supplier have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred to the Arbitrator for resolution through arbitration.
 3. In case of any dispute concerning the interpretation and/or application of this Contract shall be settled through arbitration. The arbitrator will be appointed with mutual consent of both the parties. The decisions of the Arbitrator shall be final and binding on the Parties.

Director General
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