

QUESTIONNAIRE FOR
UPPER AIR SOUNDING SYSTEM (UASS)

1. **Introduction.** The Ministry of Defence is planning to procure Upper Air Sounding System (UASS) for measurement of Upper Air parameters at various height levels for its Defence Services. The equipment would be used by various organisations for following purpose:-

- (a) Indian Army and DRDO organisations for predicting the Ballistic data for guns/ rockets and guided missiles.
- (b) Indian Navy for upper air wind profiling for air operations and determination of anaprop conditions for predicting ducts.
- (c) Indian Air Force for upper air wind profiling for air operations and missile firing.

2. The meteorological parameters that are required to be measured at different height over a station are as follows:-

- (a) Temperature
- (b) Humidity
- (c) Atmospheric Pressure
- (d) Wind Speed & Direction.

With a view to identify probable vendors who can undertake the said project the OEMs/ Manufacturers are requested to forward information as sought below on the product.

<u>SL</u>	<u>Specifications/Parameters</u>	<u>Reply</u>
	<u>System Overview</u>	
01	What are the main components of the UASS? (including consumables, computing devices etc)	
02	In what format the Met messages would be generated?	
03	What will be the frequency of Met message generation and transmission?	
04	Will the system function under all conditions of visibility? What will be the percentage of performance degradation, if any?	
	<u>Operational Parameters</u>	

05	What is the principle being used for obtaining the Met data by the system?	
06	With what accuracy will the system provide the following weather Parameters and what levels:- (a) Pressure. (b) Wind Direction. (c) Wind Speed. (d) Relative Humidity. (e) Temperature.	
07	What is the sector coverage of the system in azimuth and range?	
08	What is the principle used for wind finding?	
09	Does the system has the facility of GPS tracking?	
10	Frequency. Does the emitted frequency of the system meet National Radar Council, parameters keeping in view the ECCM?	
11	Data Handling. Is the UASS equipped to provide following:- (a) Display. (b) Pre-Flight Data including the following sub parameters :- (i) Surface pressure above mean sea level. (ii) Surface relative humidity. (iii) Surface wind speed. (iv) Surface wind direction. (v) Surface temperature. (c) Is the system capable of feeding data in the computer automatically? (d) Does the operator get warned when the antenna tracking becomes unreliable?	
	<u>Physical Characteristics</u>	
12	What are the physical characteristics of the UASS?	
13	What are the essential elements/assemblies/sub-assemblies constituting the UASS?	
14	How will the UASS be supplied power and what is the capability of the Power Back up of the system in terms of operation?	
15	What is the frequency of operation of the UASS or any of its sub systems?	
16	How will the Met Telegram be obtained by the systems and what will be the format of output?	
17	What is the printing device used with system?	
18	Is the system capable of providing man-machine interface/passage and storage of Data?	

19	How many personal are required to operate the system?	
20	Is the system containerised?	
21	What are the portability arrangements of the system?	
	<u>Operation and Maintenance</u>	
22	What are the deployment timings for the systems to be operational?	
23	What is the operating temp of the system?	
24	What is the storage temperature of the system?	
25	Is the operation of the system user friendly?	
26	Is the system ruggedised for field conditions? Can the system be developed for Marine version for onboard ship systems (only)?	
27	Does the system conform to environmental conditions as applicable vide JSS 55555?	
28	What would be the durability of the system (number of years)?	
29	Does your firm provide AMC services post warranty?	
30	What is the general shelf life of System (please include the details for each component of the system)	
	<u>Reliability and Endurance</u>	
31	Is the system designed to detect display malfunctions?	
32	Does it have Built in Test Equipment (BITE)?	
33	What is the Mean Time Between Failure (MTBF) of the system?	
34	What is the Mean Time To Repair (MTTR) of the system?	
35	Is your firm the Original Equipment Manufacturer (OEM) or do you have capability to manufacture/develop the System?	
36	Is your firm willing to supply the equipment to Ministry of Defence (MoD), India as per provisions given in Defence Procurement 2016 issued by MoD, Government of India.	