

Annexure-III

Blank BQO

Sr. No.	Technical Specification	Qty	Unit
1	<p>Head/Master Nodes: These nodes with common storage facility would work in HA mode: Software for managing cluster, batch queuing, authentication server etc. will be installed in these nodes. Each node should have:</p> <ul style="list-style-type: none">o Dual CPUs–(Intel Ice Lake) Intel Xeon-Gold 6326 (2.9GHz/16-core/185W) or better.o 512 GB (16 X 32GB) memory module ECC DDR4 RDIMM (3200 MHz or better).o Up to 2U rack-mountable form-factor only.o USB 3.0 ports to attach an external CD-DVD reader/writer or with an integrated internal CD-DVD reader/writer.o 4 x 1Gbps RJ45.o 1 x Infiniband EDR or bettero 2 X dual port 10Gbps Ethernet HBA with SR transceiverso 2 X 1.2 TB @10K RPM SAS disks; Scalability up to 8 disks within the server.o Appropriate 12 Gbps SAS or 16 Gbps FC to connect to the storage	2	Each
2	<p>Shared Storage:</p> <ul style="list-style-type: none">o Controller: Dual Controller Storage Arrayo Cache: Minimum 8GB cache per controller pairo Drives: 8 X 1.8 TB 10K RPM, in Raid 6 with 1 hot spare disk.o Host Interface: Minimum 4 host ports of 12 Gbps SAS or 16 Gbps FCo RAID Support: RAID Level 0, 1, 5 & 6 supporto Protocol: The storage should support NFS protocol	1	Each
3	<p>CPU Compute Nodes: Each compute node should have</p> <ul style="list-style-type: none">o Dual CPUs– (Intel Ice Lake) Intel Xeon-Gold 6326 (2.9GHz/16-core/185W) or better.o Minimum 512 GB (16 X 32GB) memory module ECC DDR4 RDIMM (3200 MHz or better).o 2 X1G Ethernet portso 1 X Infiniband EDR or bettero 1 X 600 GB SAS @ 10K RPM disk.	20	Each

4	<p>Login/Utility Node: These nodes offer gateway for users to login / compile codes / submit MPI jobs across the compute nodes/execute mathematical software such as Matlab, Mathematica and IDL installed locally (licenses available at IUCAA). Each node should have</p> <ul style="list-style-type: none"> o Dual CPUs (Intel Ice Lake) Intel Xeon-Gold 6326 (2.9GHz/16-core/185W) or better. o 512 GB (16 X 32 GB) memory module ECC DDR4 RDIMM (3200 MHz or better). o Up to 2U rack-mountable form-factor only. o USB 3.0 ports to attach an external CD-DVD reader/writer or with an integrated internal CD-DVD reader/writer. o 4 X 1G Ethernet ports o 1 X Infiniband EDR or better o 2 X dual port 10Gbps Ethernet HBA with SR transceivers and 10 meter FC cable o 2 X 1.2 TB @10K RPM SAS disks; Scalability up to 8 disks within the server. 	2	Each
5	RHEL Licenses (The total number of licenses should be specified separately in the technical bid. Bundle should contain qty required for the proposed solution)	1	Buldle
6	CMS Licenses (The total number of licenses should be specified separately in the technical bid. Bundle should contain qty required for the proposed solution)	1	Buldle
7	PBS Licenses (The total number of licenses should be specified separately in the technical bid. Bundle should contain qty required for the proposed solution)	1	Buldle
8	Infiniband Switches (The total number of switches should be specified separately in the technical bid. Bundle should contain qty required for the proposed solution)	1	Buldle
9	1G Switches (The total number of switches should be specified separately in the technical bid. Bundle should contain qty required for the proposed solution)	1	Buldle
10	Installation & Commissioning	1	Each