सूचना प्रौद्योगिकी और संचार विभाग

GOVERNMENT OF RAJASTHAN
Department of Information Technology & Communication

No.: F.5 (1322)/DoIT/Tech/2020/ 05514/2020 Dated: 07-12-2020

Minutes of 81st meeting of SeMT dated 27-11-2020

The Eighty first (81st) meeting of the State e-Governance Mission Team (SeMT) was held under the Chairmanship of Principal Secretary, IT&C on 27th November, 2020 at 2:00PM in the Committee Room, 2nd Floor, Dept. of IT&C, I.T. Building, Yojana Bhawan Campus, Tilak Marg, C-Scheme, Jaipur – 302 005 (Rajasthan). List of participants is enclosed at **Annexure –"A"**.

The following was discussed in the meeting:

1. Project : ICT based Educational Services in 303 Govt. Schools by Rajasthan Council of School Education (RCScE)

The Committee was briefed about proposal. RCScE intends to provide ICT based Educational Services in 303 Government Schools as part of the curriculum based on Board of Secondary Education Rajasthan (BSER) syllabus for which scope of work includes the supply of related peripheral items and services is required to perform this work.

Since majority of these schools are located in backward and far-flung areas, the tenderer will be responsible, to install, run and maintain satellite based education for hard spots as stipulated in this tender document during the contract period, for providing computer education through satellite through any legal means to make use of the display unit (already supplied), Interactive device and the C-Band antennae with prior permission of the department. Any content desired by the department shall be telecasted without any additional cost.

To provide Educational Service by hiring and deployment of manpower as per Govt. Syllabus and supply of related items in 303 Government Schools for Integrated Scheme for Computer Education (CE) and Information & Communication Technology (ICT) @ Schools (Phase-V) in specified Govt. Senior Secondary Schools/ Govt. Secondary Schools affiliated to the Board of Secondary Education Rajasthan (BSER), Ajmer for a period of 3 years.

The payment will be managed by the RCScE through concerned DPC, RCSE and no fee or any amount shall be charged from the students or school employees by the tenderer.

Financial Implication:

(Rs. in Lakh)

S. No.	Services	Monthly Estimated Cost	Duration	Total Cost (Yearly)	Total Cost (36 Month)	Budget Head
1	Computer Instructor	10000	12 Month	363.60	1090.80	Recurring
2	Satellite Infrastructure	12000	1 Time	36.36	36.36	Non-Recurring
3	Interactive Board	30000	1 Time	90.90	90.90	
4	Satellite Service, Monitoring & Teacher Training	1750	12 Month	63.63	190.89	Recurring
				Total Cost	**1408.95 Lakh**	

*Technical specification are enclosed at **Annexure-"B"**.*

Fund Management:
Expenditure would be met from the funds managed by RCScE.

Keeping in view of the fact of urgency of work, technical approval has already been accorded by Principal Secretary, IT&C as being the chairman of SeMT.

The Committee accords ex-post-facto technical approval of the proposal having estimated cost of Rs. 1408.95 Lakh; subject to the funds availability and approval of funds from Finance Dept.

2. Project : Establishment of ICT Labs in 562 Govt. Schools by Rajasthan Council of School Education (RCScE)

The Committee was briefed about proposal. RCScE intends to establish ICT Labs in 562 Government Schools. Proposed plan is as mentioned below:

Items proposed by RCScE for setting up ICT Labs- per School- for 562 Schools are as follows:-

S.No.	Item/ Description	Nos.
1	Desktop Computer System	01
2	Web Camera	01
3	Thin Client Kit with access device, monitor, keyboard & mouse	10
4	White Board and Interactive Features and Stylus	1 Set
5	Projector	01
6	Line Interactive UPS, 1000 VA with 30 Minutes backup	01
7	Earthing, Electrifications and Networking for above Setup	Include in above, as Turnkey solution
8	Project Manager one at RCSE HQ for One Year and Service Support from PDI day	Include in above, as Turnkey solution
9	Teachers Training Session (Two days), at Division/District Level (for which Training Location will be provided by the RCSE) with Desired Infra (as above), in given Warrantee period based on dated confirmed by Dept.	2 (Two) Times; Include in above, as Turnkey solution
Above Proposal includes Procurement of items listed above, Services Accessories/ Cables to link with, installation, deployment of Software, Commissioning, Training and Service Support during Warranty Period of Five (5) years.		

Estimated Cost for setting up ICT Labs-

S.No.	Work Description	Estimated Cost
1	Supply and installation of Computer Systems, Interactive Board, UPS and Networking & Electrification etc. in **562** Govt. Secondary/ Senior Secondary Schools with 5 years On-site comprehensive warranty.	Per School Estimated Cost Rs. 3.03 Lakh x 562 Schools
Total Cost		Rs. 17,02,86,000/- **Say Rs. 1702.86 Lakh**

*Technical specification are enclosed at **Annexure-"C".***

Fund Management:
Expenditure would be met from the funds managed by RCScE.

The Committee accords technical approval of the proposal having estimated cost of Rs. 1702.86 Lakh; subject to the funds availability and approval of funds from Finance Dept.

3. Project : Establishment of ICT Labs in 417 Govt. Schools and 66 Smart Class in 33 Govt. Schools by Rajasthan Council of School Education (RCScE)

The Committee was briefed about proposal. RCScE intends to establish ICT Labs in 417 Schools and 66 Smart Class Rooms as 2 per school in 33 Schools. In this context, RCScE prepared a proposal in accordance to the guidelines of Project Approval Board (PAB), Ministry of Human Resource Development, Dept. of School Education & Literacy, Govt. of India. Proposal submitted for the same is as mentioned below:

(A) ESTABLISHMENT OF ICT LABS in 417 SCHOOLS:

Items proposed by RCScE for setting up ICT Labs - per School for 417 Schools-

S.No.	Items Descriptions	Qty.
1	Desktop Computer System	1
2	Web Camera	1
3	Master Thin Client with Dual Band WiFi & Storage with Monitor, Keyboard, Mouse	1
4	Thin Client with Monitor, Keyboard, Mouse	15
5	Interactive Flat Panel TV	1
6	Ink Tank Printer	1
7	Line Interactive UPS, 1000 VA with 30 Minutes backup	1
8	Earthing, Electrifications etc.	--
9	Furniture	
10	Project Manager, one at RCScE HQ for the period of 1 year from Inspection date	--
11	Teachers Training Session (Two days), at Division/ District Level (for which Training Location will be provided by the RCScE) with Desired Infra (as above), in given Warranty Period based on dates confirmed by Dept.	2 (Two) Times

(B) ESTABLISHMENT OF 66 DIGITAL/ SMART CLASS ROOMS IN 33 SCHOOLS (2 LABS PER SCHOOL):

Items proposed by RCScE for setting up of one (1) Digital/ Smart Class Room:

S. No.	Item Description	No. of Unit	Cost (in Rs.)
1	Laptop (for the Teachers) with Bag	1	40000
2	Master Thin Client	1	20000
3	White Board with Interactive Features & Stylus	1	25000
4	Projector	1	30000
5	UPS	1	5000
Note	Teachers Training Session (1 Day), at State Level with Desired Infra (as above)		
	Total Proposed Cost including Procurement, Accessories/ Cables to link with, installation, deployment of Software, commissioning, Training and Help Centre Support during Warranty Period (three years)		

*Technical specification are enclosed at **Annexure-"D".***

Financial Implication:

(A) Estimated Cost for setting up ICT Labs (for 417 Schools)-

S.No.	Sanctioned ICT Lab	Estimated Cost
1	417 Schools (1 ICT Lab per School)	Lab Preparation (Non-recurring) @4.27050 Lakh per schools and total grant rupees 1780.80 Lakh for 417 Schools and (Recurring) @1.80 Lakh per schools its five (5) year recurring amount 3753.00 Lakh. Total amount available for five (5) year i.e. Rs.55,33,80,000/- (For 417 Schools)
Total Cost		**Rs. 55,33,80,000/- or Say Rs. 5533.80 Lakh**

(B) Estimated Cost for setting up of 66 Smart Class Rooms

S. No	Sanctioned Smart Class Room	Estimated Cost
1	33 Schools (66 Smart Class Rooms)	Digital/ SMART Classrooms Preparation (Nonrecurring) @1.20 Lakh per Smart Class Room for 66 Smart Class Rooms' project i.e. Rs.79,20,000/- (For 33 Schools)
Total Cost		**Rs. 79,20,000/- or Say Rs. 79.20 Lakh**

Overall estimated financial implication for both the components (Rs. 5533.80 lakh + Rs. 79.20 Lakh) is Rs. 5613.00 Lakh.

Fund Management:
Overall expenditure would be met from the funds managed by RCScE.

The Committee accords technical approval of the proposal having estimated cost of Rs. 5613.00 Lakh; subject to the funds availability and approval of funds from Finance Dept.

4. Project : Procurement of Computer h/w and allied items under Poshan Abhiyan by Directorate of Integrated Child Development Services (ICDS)

The Committee was briefed about proposal. Directorate of Integrated Child Development Services (ICDS) intends to procure Desktop Computer(s), Multifunctional Printer(s), and LDC Projector(s) under Poshan Abhiyan.

Deployment Plan:
Required computer hardware and allied items are to be deployed at all the CDPO offices spread over across the State.

Required computer hardware and its financial implication:

(Rs. in Lakh)

S. No.	Item Name	Required Quantity (in Nos.)	Estimated Unit Price	Estimated Total Cost
1	Computer* and Printer	178	0.80	142.40
2	LCD Projector	119	0.30	35.70
3	WiFi Installation at CDPO Office(s)	178	0.03	5.34
	Total Estimated Cost			**183.44**

Secretary, WCD Dept. requested to suggest All-in-One Computer's technical specification along with Desktop Computer.

Technical specification are enclosed at ***Annexure-"E".***

Fund Management:
Expenditure would be met from the funds managed by Directorate of ICDS.

Keeping in view of the fact of urgency of work, technical approval has already been accorded by Principal Secretary, IT&C as being the chairman of SeMT.

The Committee accords ex-post-facto technical approval of the proposal having estimated cost of Rs. 183.44 Lakh; subject to the funds availability and approval of funds from Finance Dept.

5. Project : Procurement of Aadhar kits being used for registration of 0 to 5 years old children under ICDS Programme by Directorate of Integrated Child Development Services (ICDS)

The Committee was briefed about proposal. WCD Dept. intends to develop Aadhaar Registration System under Integrated Child Development Services (ICDS) Programme of the Dept. for Aadhaar Registration of new beneficiaries in 2197 Sectors of the State.

For this, Dept. proposed to provide Tablet to Women Supervisors of 2197 sectors; and Aadhaar Kits having items (i.e. Desktop Computer, Laptop, Table, Scanner, Printer, Finger Print Scanner, Irish Scanner, GPS Device etc.) to 304 Child Development Project Officer (CDPO) of the Department.

Registration work will be executed by hiring of Data Entry Operators on Job Basis by concerned Child Development Project Office (CDPO).

During the meeting convened on 21-08-2020 at New Delhi in between team of UIDAI, GoI and representative(s) of Dept. of IT&C, GoR; it was informed by the representative of GoR that 8000 number of tablets have been procured by GoR. In case, Aadhaar enrolment through 2197 Aanganbadi Centers (*of WCD/ ICDS Dept., GoR*) for the children of age group between 0-5 years is operationalized in the State. Dept. of IT&C is agreed to provide 2197 Tablets at free of cost to WCD/ ICDS Dept.

Financial Implication:

(Rs. in Lakhs)

S. No.	Items	Qty.	Per Item Cost	Estimated Total Cost
1	Tablet (for Women Supervisor)	2197	--	--
2	One (1) Desktop Computer, Scanner, Printer, Finger Print Scanner, IRIS Scanner, GPS Device etc.	304	1.50	456.00
	Total			**456.00**

Technical specification are enclosed at ***Annexure-"F".***

Fund Management:
Expenditure would be met in the proportionate ratio (to be decided) by GoI and GoR (for which file is submitted by Directorate of ICDS/ WCD Dept. to Finance Dept., GoR).

The Committee accords technical approval of the proposal having estimated cost of Rs. 456.00 Lakh; subject to the funds availability and approval of funds from Finance Dept.

6. Project : IT-PMU to maintain and support Ayushman Bharat Mahatma Gandhi Rajasthan Swasthya Bima Yojana (AB-MGRSBY) by Rajasthan State Health Assurance Agency (RSHAA)

The Committee was briefed about proposal that Rajasthan Government has decided to launch Ayushman Bharat Mahatma Gandhi Rajasthan Swasthya Bima Yojana on 1st September 2019. Department of Medical, Health and Family Welfare has been given the task of getting an application platform developed for this purpose and software solution is up and running in entire State of Rajasthan.

Department of Medical, Health and Family Welfare intends to setup a IT-Project Management Unit (IT-PMU), which would take the responsibility to provide support to the existing developed application, design and develop new modules, develop use cases by using emerging technology like AI/ML/ Analytics in-line with the vision of State Government for providing effective health services and requisite health Insurance coverage to its' residents. IT-TPMU shall also be responsible for integrating the solution with other related health applications of Rajasthan State as well provide necessary data/ information as per the requirement of Govt. of India.

The broad scope of work for the selected IT-PMU would included following:

1. Requirement gathering, design, development, testing and rollout of new application modules
2. Enhancement/ customization/ configuration /bug fixing, Testing and Deployment of Software solution
3. User Acceptance Testing (UAT)
4. Assistance to Third Party Auditor (TPA)
5. Post Implementation Support and Maintenance (Continuous enhancement of the deployed modules, Technical Support and maintenance of the deployed module, Development of additional functionality based on the feasibility assessment and requirement of stakeholders, Assist in conducting outreach programs, and conduct training sessions and change management workshops on continuous basis).
6. Development of Adhoc Reports/ Dashboard
7. Other associated activities-
    a. Assist in evaluation of solutions
    b. Program Management

Duration of the Project: Two (2) Years.

Deployment of Technical Manpower under various categories and Financial Implication -

The resources to be deployed at the designated location in Jaipur as per requirement of Department of Medical, Health and Family Welfare, GoR; as mentioned below:

(Amount in Rs.)

SN	Profile/ Expertise	Man month Rate	Year 1		Year 2		Total for 2 years
			Number of Resource	Value for 1 year	Number of Resources	Value for 1 year	
1	Project Manager cum Business Analyst	3,02,400	1	3628800	1	36,28,800	7257600
2.	Senior Technical Expert - Java	3,02,400	1	3628800	1	36,28,800	7257600
3.	ETL/ Analytics Expert	2,70,000	1	3240000	1	32,40,000	6480000
4.	Technical Expert - Java	2,70,000	3	9720000	2	64,80,000	16200000
5.	Database Expert	2,70,000	1	3240000	1	32,40,000	6480000
6.	Front end Expert	2,16,000	1	2592000	1	25,92,000	5184000
7.	Junior Data Analytics/ MIS Analyst/ QA Expert	2,16,000	4	10368000	3	77,76,000	18144000
Total			12	36417600	10	30585600	67003200
						Say (Rs. in Lakh)	**670.03**

Fund Management:
Expenditure would be met from the funds available with Rajasthan State Health Assurance Agency (RSHAA).

The Committee accords technical approval on the proposal having estimated cost of Rs. 670.03 Lakh (*subject to the funds availability and approval of funds from Finance Dept.*); with following comments/ directions:

1. Rajasthan Health Assurance Agency (RSHAA) may hire 7 persons from NICSI for the man-power's profile/ expertise mentioned at S.No. 1 to 5.
2. RSHAA may hire 5 persons from NICSI for 2 months on the basis of rate prescribed by RajCOMP Info Services Pvt. Ltd. (RISL) for profile/ expertise mentioned at S.No. 6 and 7, and
3. After two months duration, RSHAA may hire serial no. 6 & 7 profile/ expertise for 5 person from RISL in accordance to the Administrative Order issued by RISL vide No. F4.13 (18)/ RISL/ Tech/ 2019/ 8987 dated 30-06-2020.

Meeting ended with a vote of thanks to the chair.

This bears the approval of competent level in the Department.

(Arun Chauhan)
Technical Director &
Joint Secretary, IT&C

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GOVERNMENT OF RAJASTHAN
Department of Information Technology & Communication

No.: F.5 (1322)/DoIT/Tech/2020/05514/2020 Dated: 07-12-2020

Copy for information and necessary action to:

1. P.S. to Principal Secretary, Finance Department, Rajasthan, Jaipur
2. P.S. to Principal Secretary, Education Dept., Rajasthan, Jaipur
3. P.S. to Principal Secretary, Dept. of IT&C, Rajasthan, Jaipur
4. P.S. to Secretary, Planning Dept., Rajasthan, Jaipur
5. P.S. to Secretary, Women & Child Development Department, Rajasthan, Jaipur
6. P.S. to Commissioner & Special Secretary, Dept. of IT&C, Rajasthan, Jaipur
7. P.S. to Director, Integrated Child Dev. Services (I.C.D.S.), Rajasthan, Jaipur
8. P.A. to Director Technical, RajCOMP Info Services Ltd. (RISL), Yojana Bhawan, Jaipur
9. P.S. to State Project Director, Samgra Shiksha Abhiyan (SMSA) and Addl. Commissioner, Raj. Shiksha Parishad and Commissioner, School Education, Jaipur
10. DDG & SIO, NIC, Rajasthan, Jaipur
11. P.A. to Joint Secretary (Expenditure-III), Finance Department, Raj., Jaipur
12. Financial Advisor, Dept. of IT&C, Jaipur
13. Technical Director & Joint Secretary, Dept. of IT&C, Jaipur
14. Shri Rajesh Verma, Addl. Director (Poshan), Directorate of ICDS, Jaipur
15. Shri Manoj Kumar Maheshwari, ACP (Dy. Director), Directorate of ICDS, Jaipur
16. Shri Deepak Moond, Dy. Director (IT), RCScE, Shiksha Sankul, Jaipur
17. Director, LNMIIT, Jaipur
18. Guard File.

(Sushil Parihar)
Addl. Director, IT&C

Annexure-"A"

81st Meeting of SeMT held on 27-11-2020 – List of Attendees

1.	Shri Ajitabh Sharma	Principal Secretary, IT&C, Rajasthan, Jaipur
2.	Shri Krishna Kant Pathak	Secretary, Women & Child Development Dept., Jaipur
3.	Shri Virendra Singh	Comm. & Spl. Secretary, Dept. of IT&C, Jaipur
4.	Smt. Pratibha Singh	Director, ICDS, Jaipur
5.	Shri Abhimanyu Kumar	Director (Technical), RajCOMP Info Service Ltd., Jaipur
6.	Shri H.K Juneja	Joint Secretary, Finance (E-III)
7.	Shrin Kishore Tanwani	Technical Director, NIC
8.	Shri Vinod kumar Jain	Tech. Director, NIC, RCScE, Jaipur
9.	Shri Indrajeet Singh	Deputy Commissioner (ICT), RCScE, Jaipur
10.	Shri Sushil Parihar	Additional Director, Dept. of IT&C, Jaipur
11.	Shri Nitin Verma	S.A (Joint Director), Department of IT&C, Jaipur
12.	Shri Vijay Prakash	S.A (Joint Director), Department of IT&C, Jaipur
13.	Shri Deepak Moond	Dy. Director, RCScE, Jaipur
14.	Shri Rajkumar Singh	A.C.P. (Dy. Director), Department of IT&C, Jaipur
15.	Shri Nikhil Meena	Asst. Programmer, Department of IT&C, Jaipur
16.	Ms. Garima Yadav	Informatics Assistant, Department of IT&C, Jaipur

Annexure-"B"

Technical specification suggested by Technical Committee of Dept. of IT&C for **ICT based Educational Services in 303 Govt. Schools by Rajasthan Council of School Education (RCScE)**

Item	Minimum Technical Specifications
1. White Board and Interactive Device Features with Stylus	**Interactive whiteboard/ White board with interactive device** **Screen:** Wall mountable Board to be used for writing and projection surface in class-room **Size :** Min 78 inches **Material:** Made of Ceramic Steel Matte finished surface with excellent erase ability feature when the specified writing medium is used **Certification:** Writing/Projection Surface sheet to be Certified to E3 or JFE Standard; **Writing Speed:** Real time interaction and writing speed without any time lag. **Tracking speed:** 150 Mn dots / sec or better **Resolution:** Can use a 4:3 or 16:9 **Pen/ Stylus:** Capacitive Stylus with inbuilt battery. **Other Features:** Writing performance Smooth and rounded writing experience Should be enabled with Functional and precise auto-calibration as well as manual calibration features This item should accompanied with OEM software (Provide all upgrades of the software during Warranty) Should Support multi touch & multi writing Should support Gesture Recognition like zoom, pan, tilt, flicks etc. Native handwriting recognition of English (on Windows OS platform) Should have the following interactive tools/features like Pen, Eraser, spot light, curtain, shape recognition, shape editing, auto grouping, infinite color options for annotation, color bucket, back ground pattern, lines & arrows, screen capture tools (freehand captures must), import / export files, recycle bin, unlimited pages, Cut & Paste, page navigation, save page(s), Undo/Redo, Geometric Tools like protractor, compass, ruler etc.

	Annotation Capability & integration with MS office application like MS Word, PPT & MS Excel: Shape-recognition up to six-sided figures Capability of taking Snapshot from running video Interactive Whiteboard shall have provision to search educational contents on internet **Certification :** ISO Certification for Quality *3 Years Onsite Comprehensive Warranty is required with free s/w upgradation during warranty period*
2. Set-top box and Dish Antennae	**SET-TOP BOX AND DISH ANTENNAE:** Suitable and latest Set-Top Box with remote along with C-Band Antennae with following minimum specifications • Full Metal suitable ISO make C-Band Antennae of Heavy duty grade along with mounting on rooftop & suitable ISO make set-top box. • Antennae Stand: Heavy duty (preferably pole mounted) painted with non-reflective paint (matt finish) • Antennae stand to be fixed in cement foundation to withstand high wind velocity. • Antennae must ensure minimum SD quality reception in schools. • Antennae stand with protection - Fencing around the antennae. • With 3 Years Onsite Comprehensive OEM Warranty free s/w upgrade.
3. Studio Set-up	**Fully equipped 3 Cam (HD) STUDIO set-up with -** a. Minimum 500 Sq Ft area excluding the PCR room and b. Server Room to achieve minimum SD quality reception in the schools. The studio should be fully equipped with the required infrastructure viz. • One HD Camera • Two displays (Min 55 inches) to see the content being broadcasted • Recorder for recording content • Audio equipment including mixer, encoder, decoder • Servers (with licensee software, if any) etc. These hardware items should be of latest specifications and meet out the desired requirements to run smooth satellite based classes. The studio should also have - a. Minimum 10 Mbps bandwidth linkup, and b. Adequate resources for power back-up c. Alternate bandwidth of minimum 5 Mbps arrangement for uninterrupted up-linking in case of some technical fault in the main up-linking bandwidth. *3 Years Onsite Comprehensive Warranty is required with free s/w upgradation during warranty period* The bidder shall also have to make available the technical staff to undertake the running of this studio. The bidder shall have to make available this studio in its own premises and all the costs pertaining to this shall be borne by the bidder.

Annexure-"C"

Technical specification suggested by Technical Committee of Dept. of IT&C for **Establishment of ICT Labs in 562 Govt. Schools by Rajasthan Council of School Education (RCScE)**

1. Desktop Computer:

Item	Minimum Technical Specification
Processor	Intel i5/ AMD Ryzen-5 (9th Generation/ equivalent AMD) 6 Core, with minimum 3.0 GHz or higher (Base Frequency), 9 MB Cache or higher
Chipset	Compatible Intel/ AMD Chipset
Graphics	Integrated/ Discrete Graphics Card
Memory (RAM)	8 GB DDR4 2666 MHz or higher
Storage	1 TB 7200 RPM SATA Drive
Ports	Minimum 6 USB ports out of which Min 2 USB 3.0 OR higher, 1-Display Port/ HDMI, audio jack for headphone & mic
Display	Minimum 19.0" inch or higher HD Plus (Resolution 1600x900) or higher Display, TCO Certified
Antivirus	Preloaded (Latest Version) Internet Security of Trend Micro/ Quick Heal/ Symantec/ Sophos/ Kaspersky with 3 years subscription
Certification	ROHS Compliance, BEE/ Energy Star Certified, EPEAT Certified
Keyboard & Mouse	OEM USB Keyboard & OEM USB Mouse With Pad
Network Interface	Integrated 10/100/1000
Office	Open office updated version (freeware)
Accessories	All necessary cables (Power & data cables) to be included
Warranty	3 years comprehensive on site OEM warranty from date of installation

Additional Accessories	High definition Audio with External Speakers(Two), Integrated SD Media Card reader, Dust cover for CPU, Monitor& Keyboard
Preloaded (installed) OS/Software	(1) Operating System: Ubuntu Version 18.4 or higher, 64 bit. (2) VLC player version : 2.1.6 Rincewind or Equivalent (3) Open office: LibreOffice latest version preinstalled with Ubuntu. (4) Videos Media Player: version 3.10.1 or Equivalent (5) Mozilla Firefox Browser 42.0 / Google Chrome or equivalent (or higher) preinstalled with Ubuntu. (6) Zip (7) Audacity (8) Freemind (9) GIMP (10) Inkscape (11) Pidgin (12) Thunderbird (13) Turtle art (14) Hindi Fonts (15) Geo Gebra (Separate preloaded software DVD should be provided with each Desktop)
OEM & Warranty	OEM MAF is required. 5 years comprehensive on-site warranty.
Preloaded Content	Department will provide e-content of about 100 GB, same should be preloaded in to the Desktop.

2. Web Camera:

Item	Minimum Technical Specification
Device Type	Plug & Play Web Camera
Connectivity Technology	Wired
Resolution	Minimum optical 2 MP and Shall support 1080 video capture at 30 fps,
Video	H.264 video compression
Image Sensor	CMOS
OS	Windows Mac and Linux
Video Input	Color
Audio	Built-in mics with auto noise reduction
Interfaces	USB 2.0 and Above Connector
Cable Details	USB Cable min 5 ft.
Warranty	5 Years

3. Thin Client with monitor, key board and mouse:

Wall Mount Thin Client with Monitor (Should be in IDC Top 5 in India, in last three years- under thin client category)	Wall Mount-Thin Client : Intel/AMD Dual/Quad Core up to 2.0 GHz or higher Processor with 2 MB Cache, RAM: 8 GB or higher DDR4 (or higher) Storage: 1 TB or higher Graphics: HD Graphics, Ports: Speaker & Mike Port, Minimum 4 USB Port, VGA & HDMI Monitor output, 10/100/1000 LAN, Wifi: Inbuilt Dual Band WiFi & Should work as Hotspot & should support minimum 20 nodes OS: Preloaded Linux/Ubuntu Embedded with local browser, Preloaded Open/Libra office or equivalent and email client, should be VDI certified (Citrix or VMware), Seamless working of YouTube, Local video play, video play from server. Features: Capable to work on RDP protocol & as independent client/ system. Includes- OEM/ Remote Management software for Remote Monitoring, Option to Disable/Unable USB Ports, Sent/Broadcast Message/ Screen, Dash Board with H/w and S/w information, Remote installation of application/Patches, MIS reports of each activity as mentioned in feature list etc.) Certification in the name of OEM - BIS, RoHS Certified Network Device & Secondary Link Cables: Direct UTP Cables with Factory Crimped with RJ 45 Connectors to connect MTC/PC/Server with Thin Clients along with Networking device (if any, to be used). Warranty and OEM: 5 years comprehensive on-site warranty.
Monitor	Branded 19.5 inch (or higher) Full HD monitor Color Monitor with VGA and HDMI connectivity and should be TCO 07 or better and RoHS certified. 5 years comprehensive on-site warranty.
Keyboard and Mouse	OEM Brand USB Keyboard (104 Keys) & 3-Button Optical Scroll Mouse with mouse pad. 5 years comprehensive on-site warranty.

4. Interactive whiteboard/ White board with interactive device:

Item	Minimum Technical Specification
Screen	Wall mountable Board to be used for writing and projection surface in class-room
Size	Min 78 inches
Material	Made of Ceramic Steel Matte finished surface with excellent erase ability feature when the specified writing medium is used
Certification	Writing/Projection Surface sheet to be Certified to E3 or JFE Standard
Writing Speed	Real time interaction and writing speed without any time lag.
Tracking speed	150 Mn dots / sec or better
Resolution	Can use a 4:3 or 16:9
Pen/ Stylus	Pen/Capacitive Stylus with inbuilt battery
Other Features	• Writing performance Smooth and rounded writing experience • Should be enabled with Functional and precise auto-calibration as well as manual calibration features • This item should accompanied with OEM software (Provide all upgrades of the software during Warranty) • Should Support multi touch & multi writing • Should support Gesture Recognition like zoom, pan, tilt, flicks etc. • Native handwriting recognition of English (on Windows OS platform) • Should have the following interactive tools/features like Pen, Eraser, spot light, curtain, shape recognition, shape editing, auto grouping, infinite color options for annotation, color bucket, back ground pattern, lines & arrows, screen capture tools (freehand captures must), import / export files, recycle bin, unlimited pages, Cut & Paste, page navigation, save page(s), Undo/Redo, Geometric Tools like protractor, compass, ruler etc. • Annotation Capability & integration with MS office application like MS Word, PPT & MS Excel: • Shape-recognition up to six-sided figures • Capability of taking Snapshot from running video • Interactive Whiteboard shall have provision to search educational contents on internet • **Certification :** ISO Certification for Quality • *3 Years Onsite Comprehensive Warranty is required with free s/w upgradation during warranty period*

5. Projector with Stand Accessories:

Item	Minimum Technical Specification
Resolution (Minimum)	WXGA (1280 x 800)
Projection method	Front/rear
Technology	LCD
Lumens	Min 3000 ANSI Lumens
Aspect ratio (Minimum)	16:10 Native, 4.2 supported
Contrast ratio	13000:1
Lamp Hours life	Min 5000 hours or more
Wireless Remote Control and Pointer Device	Remote Control: OEM own Pointer Device : Branded with Laser Pointer (Red), Wave length-650 nm or higher, Output Power- ~5MW, Material (Brass), AAA Battery Use
Accessories	Ceiling mount kit, HDMI Cable (15 Meters)
Input/ Output connection (Min.)	VGA - 1, HDMI - 1, USB - 1, Video In- 1, Audio In- 1

Output	D-sub 15 pin (Black molding) x 1(Output signal : Computer 1 only)
Audio input	Stereo mini jack x 1
Audio Output	Stereo mini jack x 1
Communication terminal	D-sub 9 pin x 1 / RS-232C
Accessories	To be supplied for basic installation
Certification	BIS Certification and MAF is required
Warranty	5 years comprehensive warranty including Lamp

6. UPS 1 KVA:

Item	Minimum Technical Specification
UPS Capacity	1 KVA
Protection	Full Protection
User Display	Display for input & output Voltage and battery charging
voltage	230V +-10%
Range	160V - 280V
Power factor	0.6 or higher
Back up time	168 VAH for 30 Minutes backup on 1 PC (Inbuilt Batteries) (Brands Exide/ Quanta-Amron/ HBL/ YUasa/Hitachi
Indicator	Mains On/ On Battery/ Low Battery/ Fault/ Overload
Plug and cable	Input cable of 1.5 Mtr with 3 pin Indian plug and output have 4 nos. of 5 pin Indian socket
Battery Type	Sealed Lead Acid Valve Regulated
Alarm	ON Battery/ Fault, Over Load, Low Battery
Certifications	BIS Certification for the quoted Model
Test report	OEM should submit test report for the quoted model issued by state/ central laboratory (not old from last 5 Years)
Warranty	3 years comprehensive on site OEM warranty from date of installation

Annexure-"D"

Technical specification suggested by Technical Committee of Dept. of IT&C for **Establishment of ICT Labs in 417 Govt. Schools and 66 Smart Class in 33 Govt. Schools by Rajasthan Council of School Education (RCScE)**

(A) ICT LABS

1. Desktop Computer System with Software-

Item	Minimum Technical Specification
Processor	Intel i5/ AMD Ryzen-5 (9th Generation/ equivalent AMD) 6 Core, with minimum 3.0 GHz or higher (Base Frequency), 9 MB Cache or higher
Chipset	Compatible Intel/ AMD Chipset
Graphics	Integrated/ Discrete Graphics Card
Memory (RAM)	8 GB DDR4 2666 MHz or higher
Storage	1 TB 7200 RPM SATA Drive
Ports	Minimum 6 USB ports out of which Min 2 USB 3.0 OR higher, 1- Display Port/ HDMI, audio jack for headphone & mic
Display	Minimum 19.0" inch or higher HD Plus (Resolution 1600x900) or higher Display, TCO Certified
Antivirus	Preloaded (Latest Version) Internet Security of Trend Micro/ Quick Heal/ Symantec/ Sophos/ Kaspersky with 3 years subscription
Certification	ROHS Compliance, BEE/ Energy Star Certified, EPEAT Certified
Keyboard & Mouse	OEM USB Keyboard & OEM USB Mouse With Pad
Network Interface	Integrated 10/100/1000
Office	Open office updated version (freeware)
Accessories	All necessary cables (Power & data cables) to be included
Warranty	5 years comprehensive on site OEM warranty from date of installation

Additional Accessories	High definition Audio with External Speakers(Two), Integrated SD Media Card reader, Dust cover for CPU, Monitor& Keyboard
Preloaded (installed) OS/Software	(1) Operating System: Ubuntu Version 18.4 or higher, 64 bit. (2) VLC player version : 2.1.6 Rincewind or Equivalent (3) Open office: LibreOffice latest version preinstalled with Ubuntu. (4) Videos Media Player: version 3.10.1 or Equivalent (5) Mozilla Firefox Browser 42.0 / Google Chrome or equivalent (or higher) preinstalled with Ubuntu. (6) Zip (7) Audacity (8) Freemind (9) GIMP (10) Inkscape (11) Pidgin (12) Thunderbird (13) Turtle art (14) Hindi Fonts (15) Geo Gebra (Separate preloaded software DVD should be provided with each Desktop)
OEM & Warranty	OEM MAF is required. 5 years comprehensive on-site warranty.
Preloaded Content	Department will provide e-content of about 100 GB, same should be preloaded in to the Desktop.

2. Web Camera:

Item	Minimum Technical Specification
Device Type	Plug & Play Web Camera
Connectivity Technology	Wired
Resolution	Minimum optical 2 MP and Shall support 1080 video capture at 30 fps
Video	H.264 video compression
Image Sensor	CMOS
OS	Windows Mac and Linux
Video Input	Color
Audio	Built-in mics with auto noise reduction
Interfaces	USB 2.0 and Above Connector
Cable Details	USB Cable min 5 ft.
Warranty	5 Years

3. Master Thin Client

Wall Mount Thin Client with Monitor (Should be in IDC Top 5 in India, in last three years- under thin client category)	Wall Mount-Thin Client : Intel/AMD Dual/Quad Core up to 2.0 GHz or higher Processor with 2 MB Cache, RAM: 8 GB or higher DDR4 (or higher) Storage: 1 TB or higher Graphics: HD Graphics, Ports: Speaker & Mike Port, Minimum 4 USB Port, VGA & HDMI Monitor output, 10/100/1000 LAN, Wifi: Inbuilt Dual Band WiFi & Should work as Hotspot & should support minimum 20 nodes OS: Preloaded Linux/Ubuntu Embedded with local browser, Preloaded Open/ Libra office or equivalent and email client, should be VDI certified (Citrix or VMware), Seamless working of YouTube, Local video play, video play from server. Features: Capable to work on RDP protocol & as independent client/ system. Includes- OEM/ Remote Management software for Remote Monitoring, Option to Disable/Unable USB Ports, Sent/Broadcast Message/ Screen, Dash Board with H/w and S/w information, Remote installation of application/ Patches, MIS reports of each activity as mentioned in feature list etc.) Certification in the name of OEM - BIS, RoHS Certified Warranty and OEM: 5 years comprehensive on-site warranty.
Monitor	Branded 19.5 inch (or higher) Full HD monitor Color Monitor with VGA and HDMI connectivity and should be TCO 07 or better and RoHS certified. 5 years comprehensive on-site warranty.
Keyboard and Mouse	OEM Brand USB Keyboard (104 Keys) & 3-Button Optical Scroll Mouse with mouse pad. 5 years comprehensive on-site warranty.

4. Thin Client with monitor, key board and mouse:

Wall Mount Thin Client with Monitor (Should be in IDC Top 5 in India, in last three years- under thin client category)	Wall Mount-Thin Client : Intel/AMD Dual/Quad Core up to 2.0 GHz or higher Processor with 2 MB Cache, RAM: 2 GB or higher DDR4 (or higher) Storage: 64 GB or higher Graphics: HD Graphics, Ports: Speaker & Mike Port, Minimum 4 USB Port, VGA & HDMI Monitor output, 10/100/1000 LAN Wi-Fi: Inbuilt Dual Band Wi-Fi

	OS: Preloaded Linux/Ubuntu Embedded with local browser, Preloaded Open/Libra office or equivalent and email client, should be VDI certified (Citrix or VMware), Seamless working of YouTube, Local video play, video play from server. Features: Capable to work on RDP protocol & as independent client/ system. Includes- OEM/ Remote Management software for Remote Monitoring, Option to Disable/Unable USB Ports, Sent/Broadcast Message/ Screen, Dash Board with H/w and S/w information, Remote installation of application/Patches, MIS reports of each activity as mentioned in feature list etc.) Certification in the name of OEM - BIS, RoHS Certified Network Device & Secondary Link Cables: Direct UTP Cables with Factory Crimped with RJ 45 Connectors to connect MTC/PC/Server with Thin Clients along with Networking device (if any, to be used). Warranty and OEM: 5 years comprehensive on-site warranty.
Monitor	Branded 19.5 inch (or higher) Full HD monitor Color Monitor with VGA and HDMI connectivity and should be TCO 07 or better and RoHS certified. 5 years comprehensive on-site warranty.
Keyboard and Mouse	OEM Brand USB Keyboard (104 Keys) & 3-Button Optical Scroll Mouse with mouse pad. 5 years comprehensive on-site warranty.

5. Interactive Flat Panel TV:

Size	65"
Resolution	3,840 x 2,160 (Minimum)
Brightness	350 (CD/ M^2)
Contrast Ration	1200 : 1 or better
Viewing Angle (H x V)	178 x 178
Response Time	8 ms or less
RAM	3 GB or higher
ROM	16 GB or Higher
Input	Min HDMI (2), 1 VGA / HDMI, Composite (1) / Audio
Life	Min 30,000 hours
Wi-Fi Supports	Yes
External Control	RS232C (1), RJ45 (1)
USB(Minimum)	Min 3 USB 2.0
Speaker	Built-in Speaker (10W+10W)
Operating System	Android 8.0
Detection Method	IR
Pen	Min 2 touch pens
Operating System Support	Windows /Linux/ Mac/ Android
Multi Touch Point	10 points touch
Surface Hardness	Minimum 4 mm toughened glass
Software/ Interactivity Features	Smart Writing of different colors & annotation
Features	Connectivity via wireless Screen Cast
Certifications	BIS, RoHS, UL, CE, FCC
Warranty & OEM	5 years comprehensive on-site warranty

6. Ink Tank Multi-Functional Printer-

Functions	Print , Scan, Copy
Printing Method	Color & Black both - Ink Tank
Cartridge	Ink (Pigment)
Print Speed (Minimum)	25 PPM (Mono) & 10 PPM (Color) or Higher
Print Resolution	600 x 600 dpi or higher
Auto Duplex	Yes
Memory	256 MB or higher
Connectivity	USB, Ethernet
Duty Cycle (Monthly)	10000 pages or higher
Copy Speed	10 pages per minute black and 5 pages per minute color
Copy Resolution	600 x 600 dpi or higher
Scan File Format	PDF, JPEG, TIFF BMP etc.
Scan Resolution	600 x 600 dpi or higher
Input paper tray capacity	100 pages or higher
Toner Cartridges/ Bottle	Black & Color Ink Bottle pre install
Additional Toner Cartridge/ Bottle	OEM should supply 1 company packed additional Ink bottle set
Compatible operating systems	Windows and Linux-Ubuntu
Cables/ Accessories	All the required cables, accessories
Software Media	Driver & Utility S/e CD/DVD
Certifications	BIS , ROHS
Warranty & OEM	5 years comprehensive on-site warranty

7. Laser Printer (MFP):

Item	**Minimum Technical Specification**
Type of machine	Multifunction Machine
Printing method	Monochrome laser
Printing Technology	Laser(Black)
Printer Speed	25 ppm
Input Tray Capacity	100 Pages or higher
Printer Resolution	600x600 dpi or higher
RAM Size/ Memory	256 MB
Connectivity	On USB, Ethernet
Duty Cycle (Monthly)	10000 Pages
Auto Duplex Print for A4 or Legal	Yes
Functions	Print, Copy, Scan
Scanning feature	Yes
Scan Type/ Technology	Flatbed with ADF
Scan file format	PDF, JPEG, TIFF, BMP etc.
Media size supported	A4, A5, Legal
Scan Speed	15 ppm or higher
Scan resolution	600x600 dpi or higher
Copy resolution	600x600 dpi or higher
Toner/ Cartridge	Laser Black toner cartridge pre-installed
Wi-Fi	Yes
Energy Star	Yes
Compatible Operating System	Window 7, 8, 10 (32/64 Bit, Linux- Mac OS)
Cables/ Accessories	All the required cables, Accessories.
Software media	Driver & utility Software CD/DVD

BIS Registration	Yes
Other Certifications	UL, CE
Warranty	5 years comprehensive on site OEM warranty from date of installation

8. UPS 1 KVA:

Item	Minimum Technical Specification
UPS Capacity	1 KVA
Protection	Full Protection
User Display	Display for input & output Voltage and battery charging
voltage	230V +-10%
Range	160V - 280V
Power factor	0.6 or higher
Back up time	168 VAH for 30 Minutes backup on 1 PC (Inbuilt Batteries) (Brands Exide/Quanta-Amron/ HBL/ YUasa/Hitachi
Indicator	Mains On/ On Battery/ Low Battery/ Fault/ Overload
Plug and cable	Input cable of 1.5 Mtr with 3 pin Indian plug and output have 4 nos. of 5 pin Indian socket
Battery Type	Sealed Lead Acid Valve Regulated
Alarm	ON Battery/ Fault, Over Load, Low Battery
Certifications	BIS Certification for the quoted Model
Test report	OEM should submit test report for the quoted model issued by state/ central laboratory (not old from last 5 Years)
Warranty	5 years comprehensive on site OEM warranty from date of installation

(B) DIGITAL/ SMART CLASS ROOMS

1. Laptop

Item	Minimum Technical Specification
Processor	Intel®core i7 10th Generation quad core, with minimum 1.8 GHz or higher (Base Frequency), cache 8 MB or higher
Operating System	Pre-installed Genuine OEM Microsoft Windows 10 Professional (64 bit) with OEM recovery partition/ recovery DVD
Display	14" or higher diagonal +/-5% HD Display
Memory (RAM)	8 GB DDR4 2400 MHz or higher
Hard Drive	1 TB SATA Drive
Speaker & Microphone	Inbuilt speakers and integrated digital microphone
Connection Type	Minimum 2 USB 3.0 or higher, 1 VGA/ HDMI, Headphone/ microphone combo/ separate, 1 multi-format SD media card reader
Network card	Integrated 10/100/1000 GB Ethernet LAN with 3 Mtr. CAT6 Patch Cord
Wireless Connectivity	Bluetooth 4.0 or above &integrated Wi-Fi 802.11 b/g/n
Graphics	Integrated HD Graphics
Web Cam	HD Web Camera (Front facing)
Battery	Minimum 4 Hrs. Battery Backup (three years warranty)
Power Adapter	Standard OEM power adapter
Antivirus	Preloaded Internet Security of Trend Micro / Symantec / Sophos/ Quick Heal/ Kaspersky with 5 Year Subscription
Office	Open Office updated version (freeware)
Keyboard	OEM standard keyboard with gesture support

Certification	ROHS Compliance, Energy Star, Certified for supplied OS, EPEAT Certified
Accessories	Carry Bag
Warranty	3 years comprehensive on site OEM warranty from date of installation

2. Master Thin Client

Wall Mount Thin Client with Monitor (Should be in IDC Top 5 in India, in last three years- under thin client category)	Wall Mount-Thin Client : Intel/AMD Dual/Quad Core up to 2.0 GHz or higher Processor with 2 MB Cache, RAM: 8 GB or higher DDR4 (or higher) Storage: 1 TB or higher Graphics: HD Graphics, Ports: Speaker & Mike Port, Minimum 4 USB Port, VGA & HDMI Monitor output, 10/100/1000 LAN, Wifi: Inbuilt Dual Band WiFi & Should work as Hotspot & should support minimum 20 nodes OS: Preloaded Linux/Ubuntu Embedded with local browser, Preloaded Open/ Libra office or equivalent and email client, should be VDI certified (Citrix or VMware), Seamless working of YouTube, Local video play, video play from server. Features: Capable to work on RDP protocol & as independent client/ system. Includes- OEM/ Remote Management software for Remote Monitoring, Option to Disable/Unable USB Ports, Sent/Broadcast Message/ Screen, Dash Board with H/w and S/w information, Remote installation of application/ Patches, MIS reports of each activity as mentioned in feature list etc.) Certification in the name of OEM - BIS, RoHS Certified Warranty and OEM: 3 years comprehensive on-site warranty.
Monitor	Branded 19.5 inch (or higher) Full HD monitor Color Monitor with VGA and HDMI connectivity and should be TCO 07 or better and RoHS certified. 3 years comprehensive on-site warranty.
Keyboard and Mouse	OEM Brand USB Keyboard (104 Keys) & 3-Button Optical Scroll Mouse with mouse pad. 3 years comprehensive on-site warranty.

3. Interactive whiteboard/ White board with interactive device:

Item	**Minimum Technical Specification**
Screen	Wall mountable Board to be used for writing and projection surface in class-room
Size	Min 78 inches
Material	Made of Ceramic Steel Matte finished surface with excellent erase ability feature when the specified writing medium is used
Certification	Writing/Projection Surface sheet to be Certified to E3 or JFE Standard
Writing Speed	Real time interaction and writing speed without any time lag.
Tracking speed	150 Mn dots / sec or better
Resolution	Can use a 4:3 or 16:9
Pen/ Stylus	Capacitive Stylus with inbuilt battery
Other Features	• Writing performance Smooth and rounded writing experience • Should be enabled with Functional and precise auto-calibration as well as manual calibration features • This item should accompanied with OEM software (Provide all upgrades of the software during Warranty) • Should Support multi touch & multi writing • Should support Gesture Recognition like zoom, pan, tilt, flicks etc.

Item	Minimum Technical Specification
	• Native handwriting recognition of English (on Windows OS platform) • Should have the following interactive tools/features like Pen, Eraser, spot light, curtain, shape recognition, shape editing, auto grouping, infinite color options for annotation, color bucket, back ground pattern, lines & arrows, screen capture tools (freehand captures must), import / export files, recycle bin, unlimited pages, Cut & Paste, page navigation, save page(s), Undo/Redo, Geometric Tools like protractor, compass, ruler etc. • Annotation Capability & integration with MS office application like MS Word, PPT & MS Excel: • Shape-recognition up to six-sided figures • Capability of taking Snapshot from running video • Interactive Whiteboard shall have provision to search educational contents on internet • **Certification :** ISO Certification for Quality • *3 Years Onsite Comprehensive Warranty is required with free s/w upgradation during warranty period*

4. Projector with Stand Accessories:

Item	Minimum Technical Specification
Resolution (Minimum)	WXGA (1280 x 800)
Projection method	Front/rear
Technology	LCD
Lumens	Min 3000 ANSI Lumens
Aspect ratio (Minimum)	16:10 Native, 4.2 supported
Contrast ratio	13000:1
Lamp Hours life	Min 5000 hours or more
Wireless Remote Control and Pointer Device	Remote Control: OEM own Pointer Device : Branded with Laser Pointer (Red), Wave length-650 nm or higher, Output Power- ~5MW, Material (Brass), AAA Battery Use
Accessories	Ceiling mount kit, HDMI Cable (15 Meters)
Input/ Output connection (Min.)	VGA - 1, HDMI - 1, USB - 1, Video In- 1, Audio In- 1
Output	D-sub 15pin (Black molding) x 1(Output signal : Computer 1 only)
Audio input	Stereo mini jack x 1
Audio Output	Stereo mini jack x 1
Communication terminal	D-sub 9pin x 1 / RS-232C
Accessories	To be supplied for basic installation
Certification	BIS Certification and MAF is required
Warranty	3 years comprehensive warranty including Lamp

5. UPS 1 KVA:

Item	Minimum Technical Specification
UPS Capacity	1 KVA
Protection	Full Protection
User Display	Display for input & output Voltage and battery charging
voltage	230V +-10%
Range	160V - 280V
Power factor	0.6 or higher
Back up time	168 VAH for 30 Minutes backup on 1 PC (Inbuilt Batteries) (Brands Exide/Quanta-Amron/HBL/YUasa/Hitachi)
Indicator	Mains On/ On Battery/ Low Battery/ Fault/ Overload

Plug and cable	Input cable of 1.5 Mtr with 3 pin Indian plug and output have 4 nos. of 5 pin Indian socket
Battery Type	Sealed Lead Acid Valve Regulated
Alarm	ON Battery/ Fault, Over Load, Low Battery
Certifications	BIS Certification for the quoted Model
Test report	OEM should submit test report for the quoted model issued by State/ Central laboratory (not old from last 5 Years)
Warranty	3 years comprehensive on site OEM warranty from date of installation

Annexure-"E"

Technical specification suggested by Technical Committee of Dept. of IT&C for
Procurement of Computer h/w and allied items under Poshan Abhiyan by Directorate of Integrated Child Development Services (ICDS)

(1) Desktop Computer

Item	Minimum Technical Specifications
Processor	Intel i5/ AMD Ryzen-5 (9th Generation/equivalent AMD) 6 core, with minimum 3.0 GHZ or higher (Base Frequency), 9 MB Cache or higher
Chipset	Compatible Intel/AMD chipset
Operating System	Windows 10 Professional 64 bit preloaded with OEM recovery partition/ Recovery DVD
Graphics	Integrated/ Discrete Graphic card
Memory	8GB DDR4 2666MHz or higher
Storage	1 TB 7200 RPM SATA Drive
Ports	Minimum 8 USB ports out of which Min 2 USB 3.0 OR higher, 1-Display Port/ HDMI, audio jack for headphone & mic
Display	HD plus (Resolution 1600x900) or higher Display, TCO Certified
Warranty	3 years comprehensive on site OEM warranty from date of installation
Antivirus	Preloaded (Latest version) Internet Security of Trend Micro/ Quick Heal/ Symantec/ Sophos/ Kaspersky with 3 years Subscription
Certification	ROHS Compliance, BEE/ Energy Star certified, EPEAT Registered in India
Keyboard & Mouse	OEM USB Keyboard & OEM USB Mouse with pad
Network interface	Integrated 10/100/1000
Office	Open office updated version (freeware)
Accessories	All necessary cables (Power & data cables) to be included

(1.a) Desktop Computer (All-in-One)
(As the *Secretary, WCD Dept. requested for Desktop computers as All-in-One).*

Item	Minimum Technical Specifications
Processor	Intel i5/ AMD Ryzen-5 (9th Generation/equivalent AMD) 6 core, with minimum 3.0 GHZ or higher (Base Frequency), 9 MB Cache or higher
Chipset	Compatible Intel/AMD chipset
Operating System	Windows 10 Professional 64 bit preloaded with OEM recovery partition/Recovery DVD
Graphics	Integrated/Discrete Graphic card
Memory	8GB DDR4 2666MHz or higher
Storage	1 TB 7200 RPM SATA Drive
Ports	Minimum 4 USB ports or higher out of which Min 2 USB 3.0 OR higher, 1-Display Port/ HDMI, audio jack for headphone & mic
Display	21.5 Inch Full HD Display, TCO Certified
Warranty	3 years comprehensive on site OEM warranty from date of installation
Antivirus	Preloaded (Latest version) Internet Security of Trend Micro/ Quick Heal/ Symantec/ Sophos/ Kaspersky with 3 years Subscription
Certification	ROHS Compliance, BEE/ Energy Star certified, EPEAT Registered in India
Keyboard & Mouse	OEM USB Keyboard & OEM USB Mouse with pad
Network interface	Integrated 10/100/1000
Office	Open office updated version (freeware)
Accessories	Web Cam, Speaker & Mic. and all necessary cables (Power & data cables) to be included

(2) Laser Printer

Item	Minimum Technical Specifications
Print Technology	Monochrome laser
Print speed	18 ppm or more
Print quality black	Up to 600 x 600 dpi
Duty cycle (monthly, A4)	8000 pages or higher
Port	1 USB
Duplex Printing	Yes
Print Language	Host based Printing
Voltage Rating	220 to 240V AC(+/- 10%), 50 Hz (+/- 2 Hz)
Compatible operating systems	Windows 7, 8, 10 (32 bit/64 bit), Linux, Mac OS.
Software media	Driver & utility software CD/DVD
Warranty	3 years comprehensive on-site OEM warranty from date of installation

(3) LCD Projector:

Item	Minimum Tech. Specs.
Resolution	WXGA (1280 x 800)
Portable white display screen with stand accessories	Min 119 inch diagonal movable wall mounted white screen
Technology	LCD
Lumens	Min 3000 ANSI
Resolution: Min	WXGA (1280 x 800)
Aspect ratio	16:9/ 16:10
Contrast ratio	3000:1
Input	VGA x 1, HDMI x1, Component Video: D-sub 15pin x1
Output	D-sub 15pin (Black molding) x 1(Output signal : Computer 1 only)
Audio input:	Stereo mini jack x 1
Audio Output:	Stereo mini jack x 1
Communication terminal :	D-sub 9pin x 1 / RS-232C
Lamp Hours	Min 4000 hours
Projection method	Front/rear
Accessories	To be supplied for basic installation
Warranty	3 years comprehensive on site OEM warranty from date of installation

(4) WiFi Installation:

The user Department is not clear about the requirements and usability of the WiFi Installation in their Department. Hence, the specifications for WiFi Installation are not suggested by Dept. of IT&C.

Annexure-"F"

Technical specification suggested by Technical Committee of Dept. of IT&C for **Procurement of Aadhar kits being used for registration of 0 to 5 years old children under ICDS Programme by Directorate of Integrated Child Development Services (ICDS)**

(A) Details of minimum technical specifications suggested by Technical Committee of Dept. of IT&C for the items of (1) Desktop Computer (2) Laptop, and (3) Multi-Functional Printer/ MFP-

1. Desktop Computer:

Item	Minimum Technical Specification
Processor	Intel i5/ AMD Ryzen-5 (9th Generation/ equivalent AMD) 6 Core, with minimum 3.0 GHz or higher (Base Frequency), 9 MB Cache or higher
Chipset	Compatible Intel/ AMD Chipset
Operating System	Windows 10 Professional 64 bit preloaded with OEM recovery partition/ Recovery DVD
Graphics	Integrated/ Discrete Graphics Card
Memory (RAM)	8 GB DDR4 2666 MHz or higher
Storage	1 TB 7200 RPM SATA Drive
Ports	Minimum 6 USB ports out of which Min 2 USB 3.0 OR higher, 1- Display Port/ HDMI, audio jack for headphone & mic
Display	Minimum 19.0" inch or higher HD Plus (Resolution 1600x900) or higher Display, TCO Certified
Antivirus	Preloaded (Latest Version) Internet Security of Trend Micro/ Quick Heal/ Symantec/ Sophos/ Kaspersky with 3 years subscription
Certification	ROHS Compliance, BEE/ Energy Star Certified, EPEAT Certified
Keyboard & Mouse	OEM USB Keyboard & OEM USB Mouse With Pad
Network Interface	Integrated 10/100/1000
Office	Open office updated version (freeware)
Accessories	All necessary cables (Power & data cables) to be included
Warranty	3 years comprehensive on site OEM warranty from date of installation

2. Laptop:

Item	Minimum Technical Specification
Processor	Intel®core i7 10th Generation quad core, with minimum 1.8 GHz or higher (Base Frequency), cache 8 MB or higher
Operating System	Pre-installed Genuine OEM Microsoft Windows 10 Professional (64 bit) with OEM recovery partition/ recovery DVD
Display	14" or higher diagonal +/-5% HD Display
Memory (RAM)	8 GB DDR4 2400 MHz or higher
Hard Drive	1 TB SATA Drive
Speaker & Microphone	Inbuilt speakers and integrated digital microphone
Connection Type	Minimum 2 USB 3.0 or higher, 1 VGA/ HDMI, Headphone/ microphone combo/ separate, 1 multi-format SD media card reader
Network card	Integrated 10/100/1000 GB Ethernet LAN with 3 Mtr. CAT6 Patch Cord

Wireless Connectivity	Bluetooth 4.0 or above & integrated Wi-Fi 802.11 b/g/n
Graphics	Integrated HD Graphics
Web Cam	HD Web Camera (Front facing)
Battery	Minimum 4 Hrs. Battery Backup (three years warranty)
Power Adapter	Standard OEM power adapter
Antivirus	Preloaded Internet Security of Trend Micro / Symantec / Sophos/ Quick Heal/Kaspersky with 5 Year Subscription
Office	Open Office updated version (freeware)
Keyboard	OEM standard keyboard with gesture support
Certification	ROHS Compliance, Energy Star, Certified for supplied OS, EPEAT Certified
Accessories	Carry Bag
Warranty	3 years comprehensive on site OEM warranty from date of installation

3. Multipurpose Laser Printer (MFP):

Item	Minimum Technical Specification
Type of machine	Multifunction Machine
Printing method	Monochrome laser
Printing Technology	Laser(Black)
Printer Speed	25 ppm
Input Tray Capacity	100 Pages or higher
Printer Resolution	600x600 dpi or higher
RAM Size/ Memory	256 MB
Connectivity	On USB, Ethernet
Duty Cycle (Monthly)	10000 Pages
Auto Duplex Print for A4 or Legal	Yes
Functions	Print, Copy, Scan
Scanning feature	Yes
Scan Type/ Technology	Flatbed with ADF
Scan file format	PDF, JPEG, TIFF, BMP etc.
Media size supported	A4, A5, Legal
Scan Speed	15 ppm or higher
Scan resolution	600x600 dpi or higher
Copy resolution	600x600 dpi or higher
Toner/ Cartridge	Laser Black toner cartridge pre-installed
Wi-Fi	Yes
Energy Star	Yes
Compatible Operating System	Window 7, 8, 10 (32/64 Bit, Linux- Mac OS)
Cables/ Accessories	All the required cables, Accessories.
Software media	Driver & utility Software CD/DVD
BIS Registration	Yes
Other Certifications	UL, CE
Warranty	3 years comprehensive on site OEM warranty from date of installation

(B) **Details of minimum technical specifications suggested by Technical Committee of Dept. of IT&C for the items of (1) Camera (2) Finger Print Device (3) IRIS Device, and (4) GPS Device (***Same as UIDAI specifications provided by Directorate of ICDS/ Women & Child Development Department (in accordance to the Circular No. 4(4)/ 57/ 122/ 2012/ UIDAI/ Pt dated 31-12-2018 issued by UIDAI (E & U Division), Ministry of Electronics & IT, Govt. of India, New Delhi)].*

1. Camera:

Specification	Device
Capture mode	Plain live capture
Image Quality	Full frontal (0x01) as per IsO/IEC 19794-5
Minimum Resolution	800x600
Capture mode	Manual capture with auto focus and auto lighting adjustment
Sensor	>2 Mega pixel native
Connectivity	High speed USB 2.0, USB-IF certified
Lens	Fixed, SLR
Power	Through USB/ Independent PS/ Lithium Ion preferred to AA/AAA batteries
Mount	Tripod
Operating temperature	0 to 50 degree Celsius
Humidity	10-90%
Safety standard	UL
Software API	Compliant with latest UIDAI device capture API specifications
Durability/ Shock	IP 54

Note: Total of only one port shall be available for connectivity and power.

2. Finger Print Device

Specification	Details
Capture mode	Plain live scan capture
Image Acquisition Requirements	Setting level 31 or higher (section 9.1 of Biometric Design Standards for UID Applications V1.0)
Image evaluation frame rate	>3 frames/sec, continuous image capture
Capture mode	Auto capture with built-in quality check (incorporates NIST quality considerations)
Capture area	>76mmx80mm
Connectivity	USB 2, USB-if certified
Power	Through USB
Dimension (WxHxD)	<160mmx160mmx160mm
Weight	Maximum 2.5kg
Operating temperature	0-50 C
Humidity	10-90% non-condensing
Durability/Shock	IP 54
Standards	UL certified (if applicable). Meets ISO 19794-4:2005 Section 7 and Annex A Certification requirements (IAFIS Appendix F certified).
Software API	Complaint with latest UIDAI device capture API specifications Linux/Windows 64 bit VDM ready certified by UIDAI

Note: Total of only one port shall be available for connectivity and power.

Single Fingerprint Scanner Device for use with Android Tablet:

- STQC certified Single Finger- Print biometric device for Aadhaar Authentication with driver, in-built template extractor software/ SDK (mandatorily with license, if required) (STQC certificate for device must be submitted)
- API/SDK for Android (4.4 and above) platform
- Device should be plug and play with any android (4.4 or above) tablet without need of any additional license to be deployed.
- The device should have integrated USB 2.0 type connector.
- Device must come with connector cables to allow connection of the device to Micro USB port.
- Sample application for Android platform to test sensor/ extractor
- Vendor has to provide all necessary technical support for integration of their device.

3. Iris Device

Specification	Stationary (mounted: wall, tripod or stand)[1]	Hand-held[2]	Hand-held with alignment aid[3]
Iris diameter (in pixel)	>210		
Spatial resolution pixel resolution of simultaneous captured eyes[4]	>60% @ 4.0Lp/mm >16 pixels/mm		
Viewfinder	External	Internal	External or Internal
Capture distance	>750mm	>50mm	>20mm
Capture volume (width/height/depth)	>250x500x500mm	>20x15x12mm	>20x15x12mm
Exposure time	<15ms	<33ms	<33ms
Imaging wavelength	700-900nm		
Spectral spread	Power in any 100nm band >35% of total power		
Scan type	Progressive		
Image margins	Left & Right: 0.50xiris diameter, Top &bottom: 0.25xiris diameter		
Pixel depth	>8 bits/pixel		
Image evaluation frame rate	>5 frames/sec, continuous image capture		
Capture mode	Auto capture with built-in quality check (incorporates NIST quality considerations)		
Sensor signal to noise ratio	>36DB		
Connectivity[5]	USB 2, USB-if certified or networked (TCP/IP)	USB 2, USB-if certified	
Power	USB or independent PS		
Weight	NA	< 1kg	> 1kg
Dimension	< 300x100x300mm	< 220x200x100mm	<220x200x100mm
Operating temperature	0-49C		
Humidity	10-90% non-condensing		
Durability/Shock	IP54		
Safety standard	Exempt group per IEC 624671: 2006-07		
Standards	FCC class A, RoHS		

Software AP	Compliant with latest UIDAI device capture API specifications. Linux/Windows 64bit VDM ready certified by UIDAI

Note: Total of only one port shall be available for connectivity and power.
[1]Stationary: Any capture process where the device is stationary and the subject is required to position and rest himself/herself.
[2]Hand-held: Operator operates and holds the camera and the subject is stationary.
[3]Alignment aid: Camera has mechanical fixture for alignment. Optical viewfinder is not considered alignment aid.
[4]Considered simultaneous if second eye is captured within 2 seconds of first eye done without moving the device.
[5]Total of only 1 USB port will be available for connectivity and power.

Iris Authentication Device for use with Android Tablet:

- STQC certified **Iris Authentication Device** for Aadhaar Authentication and extractor software/ SDK (STQC certificate for device must be submitted)
- API/SDK for Android (4.4 and above) Operating System
- Device should be plug and play with any android (4.4 or above) without need of any additional license to be deployed.
- The device should have integrated USB 2.0 type connector.
- Device must come with connector cables to allow connection of the device to Micro USB port.
- Sample application for Android platform to test sensor/ extractor
- Vendor has to provide all necessary technical support for integration of their device.

4. GPS Device:

Specification	Details
General	The GPS should be certified by UIDAI as per GPS related OM 4(4)/57/122/2016/E&U-pt
Accessories	With all necessary/ required cables and accessories to connect to the PC/ Laptop
Warranty	3 years comprehensive on-site warranty

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