**ANNEXURE: B**

## TECHNICAL BID PROFORMA
### Item Name: Oscilloscope

**1.0    Bidder Eligibility Criteria:**

| I | Bidder Eligibility Criteria-I (Public Procurement – Preference to Make in India) | Class I / Class II | Local Content value | Reference, Page No. |
|---|---|---|---|---|
| I | Only 'Class-I local suppliers' and 'Class-II local suppliers', as defined under DIPP, MoCI Order No. P-45021/2/2017-PP (BE II) dated 16th September 2020 and other subsequent orders issued therein. | | | |
| **2.0** | **Bidder Eligibility Criteria-II** | Compliance (Yes/No) | Reference Page No. | Remarks, If any |
| 1 | The bidder/OEM should have supplied at least 3 similar items to IITs, NITs, IISERs, CSIR Labs or other Govt. R&D organizations in the last 2 years, PO copies or installation certificates along with contact details of end user need to be submitted as the proof of supply.  IIT Madras reserves its right to verify the claims submitted by the bidder and the feedback from the previous customers will be part of technical evaluation. | | | |

**3.0  Technical Compliance:**

## Oscilloscope

| S.No | Specifications | Comply/ Not Comply | Ref. Page No. |
|---|---|---|---|
| 1. | Bandwidth of the oscilloscope should be 500MHz or more(upgradable to 1.5GHz) | | |
| 2. | Number of channels : 4 | | |
| 3. | Sample rate should be more than >5GS/s | | |
| 4. | Record length should be >30 Mpoints per channel | | |
| 5. | Input coupling of AC, DC should be available | | |
| 6. | Input impedance should be 50$\Omega$, 1M$\Omega$ | | |
| 7. | ADC/ vertical resolution should be 12 bits/16bits | | |

| 8. | Input sensitivity at 50Ω should be 600μV/div- 1V/div and at 1MΩ it should be 600μV/div-10V/div | | |
|---|---|---|---|
| 9. | Maximum input voltage at 50Ω should be 5V$_{rms}$ and at 1MΩ should be 300 V$_{rms}$ or better | | |
| 10. | Channel to channel isolation should be ≥ 200:1 | | |
| 11. | Time base range should be 200ps/div to 1000s/div or better | | |
| 12. | Rise time should be less than 500ps | | |
| 13. | Trigger rate should be 200ns or better | | |
| 14. | Passive probes (both 10x & 1x attenuation) for each channel, compatible for 500 MHz operation should be quoted | | |
| 15. | Digital down conversion-based spectrum analysis and simultaneous frequency and time domain analysis should be available.. Digital down conversion span should approximately be around 1kHz-300MHz. Resolution bandwidth settings should be 1mHz-15MHz | | |
| 16. | Following measurements should be possible with the quoted oscilloscope: Rise/fall time, Skew, Period/frequency, Data rate, positive/negative width, and positive/negative overshoot (atleast 32 measurements simultaneously) | | |
| 17. | Waveform capture rate should be >400000 wfm/s | | |
| 18. | Trigger frequency counter should be ≥8-bit resolution | | |
| 19. | Display & interfaces should be ≥13 inch HD 1920x1080 (Multi touch capacitive display) | | |
| 20. | LAN & USB ports should be provided | | |
| 21. | Minimum onsite warranty should be 3 years from the date of installation of products. | | |
| 22. | Optional components: Any optional components available with the oscilloscope should be quoted. | | |
| 23. | Installation and training onsite is required. | | |