

**SCHEDULE 20: GAURANTEED TECHNICAL PARTICULARS - TELECOMMUNICATION SYSTEM
GUARANTEES FOR 33/11 KV SUBSTATION TELECOM SYSTEM**

No	Particulars	Unit	Employer's requirement	Guar Value	Refer . Doc
1	Manufacturer's Name and Country		State		
2	Multiplexer type/Model		STM-1/4		
3	Nx2MBit Multiplexer		State		
4	Terminal equipment (State id provided)		State		
5	Minimum experience in manufacture of SDH Multiplexer	Years	10		
6	Minimum years of Service outside country Origin of the Multiplexer	Years	7		
7	Multiplexer technology		SDH, GBE & MPLS-TP		
8	SDH Capacity [STM-1]	Mbps	155.52MBps		
9	GBE Capacity	Gbps	1.25Gbps		
10	Maximum extension of transmission capacity of terminal equipment by adding plug in cards		State		
11	Maximum extension for multiplexer and terminal equipment racks.		State		
12	Maximum extension of transmission capacity for the multiplexer based on 2MBit-hierarchy		State		
13	Integration to existing KPLC NMS		Required		
14	Configurability from existing NMS		Required		
15	Telephony Voice Service capability		Required		
16	SCADA Data Service capability		Required		
17	CCTV data service capability		Required		
18	Teleprotection functionality standard as per IEC 60834-1		Required		
19	Craft Interface Connectivity to equipment		ITU-T G.773		
20	Optical interface for use between Teleprotection and digital Multiplexer		IEEE C37.94		
21	Data Communication channel to NMS and between nodes		ECC/ITU-T G.773		
22	Connection of PDH electrical tributary interfaces to the SDH equipment		ITU-T G.703		
23	Synchronous optical interface protection		1+1 Protection		
24	Timing and synchronization		ITU-T G. 783		
25	Supply of associated accessories and materials		Required		
26	Perpetual telecom equipment license		Required		
27	Supply of equipment wall mounted cabinet		Required		