CLIENT :

PROJECT :GANDHI HOSPITAL_8TH FLOOR

DOC NAME : LOAD SUMMARY SHEET

DOC NUMBER : MECS/2023/GH/8TH/ELE/05

DATE : 12.01.2024

REVISION R3

SL.No	DESCRIPTION	CONNECTING LOAD (KW)	DIVERSITY FACTOR	MAXIMUM LOAD (KW)
1	Lighting Load	4.4	0.9	3.9
2	RAW power Load	66.1	0.7	46
3	Emergency Lighting Load	1.2	0.9	1.1
4	UPS power Load	37.0	0.7	26
5	AC Loads	74	0.8	59
6	Equipment in CSSD	78	0.8	62
7	OT Medical Equipment UPS load in kw (total 6 OTs)	39	0.8	31
8	TIR Medical Equipment UPS load in kw (total 3 TIRs)	15	0.8	12
9	Integrated Room UPS Loads	3	0.8	2
10	OT & TIR AC & Other Load in KW	294	0.8	236
11	Lift Load (1No each 26KW)	26	0.8	21
	TOTAL	**637**		**500**
Load in KW		**637**	**KW**	**500**
Total Load in KW			**KW**	**500**
Group Diversity @80%			**KW**	**400**
Total KVA at 0.80 P.F			**KVA**	**500**
80% loading on tranformer capacity			**KVA**	**625**
(As per the Load Calculation we required 630KVA Transformer with 100% DG backup				
UPS LOAD CALCULATION				
1	Emergency Lighting Load	1.2	0.9	1.1
2	UPS power Load	37.0	0.7	26
Total Maximum Demand				27.0
Total KVA at 0.85 Power Factor				32
Considering 80% Efficiency on UPS Selection				40
(As the near by UPS rating available in market is 20KVA) .So we recommend = 2 no's 20KVA.				
No of Batteries				
Total Rated KVA			20.0	KVA
Battery Power			150	AH
Battery Voltage			12	V
Backup Time			1.50	Hour
No of Batteries			31	Nos
As the Recommended Batteries are 32Nos of 150AH for Each 20KVA UPS				
EACH OT UPS LOAD CALCULATION				
1	OT Medical Equipment UPS load in kw (Total 6 OTs)	38.9	0.8	31.2
Total Maximum Demand				31.2
Total KVA at 0.85 Power Factor				37
Considering 80% Efficiency on UPS Selection				46
(As the near by UPS rating available in market is 10KVA) .So we recommend = 1 no's 10KVA each OT. (total 6Nos 10KVA UPS for 6 OTs)				
No of Batteries				
Total Rated KVA			10.0	KVA

Battery Power			150	AH
Battery Voltage			12	V
Backup Time			4.00	Hour
No of Batteries			31	Nos
As the Recommended Batteries are 32Nos of 150AH for Each 10KVA UPS				
EACH TIR UPS LOAD CALCULATION				
1	TIR Medical Equipment UPS load in kw (Total 3 TIRs)	14.7	0.8	11.7
2	Integrated Room UPS Loads	3.1	0.8	2.4
Total Maximum Demand				14.2
Total KVA at 0.85 Power Factor				17
Considering 80% Efficiency on UPS Selection				21
(As the near by UPS rating available in market is 10KVA) .So we recommend = 1 no's 10KVA each TIR. (total 3Nos 10KVA UPS for 3 TIRs)				
No of Batteries				
Total Rated KVA			10.0	KVA
Battery Power			150	AH
Battery Voltage			12	V
Backup Time			4.00	Hour
No of Batteries			31	Nos
As the Recommended Batteries are 32Nos of 150AH for Each10KVA UPS				