AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH (AIUB)

Faculty of Engineering
Department of EEE and CoE
Undergraduate Program

Final Term Assignment

Topic	Last Date of Submission	Submission Link
Assignment	24/04/2021	MS Teams Assignment Section

Instructions
1. This is a group submission. Each group will consist of 5 members. **Each group will submit only one file.** You are free to form a group by your own. If you can't form a group, just throw me a mail. I will put you in a random group. **Again, it's a group submission** due to current turmoil situation.
2. Write down all the group member's Name and ID in the AutoCAD window
3. Upload CAD (.dwg file) and PDF file. Don't upload .zip / .rar / .word / .dwt file
4. Do all the tasks that you learnt in the class (i.e.- dimension, labeling, fittings, wiring, legend etc.)
5. If you face any problem or have any query, send me a mail before the deadline.
6. Submit your assignment before the deadline through above mentioned link.

Assignment Question

Mr. Mashrafe Bin Mortaza has purchased a land from Navana Real Estate Ltd. which is located at Dhanmondi 32, Dhaka. Now he wants to construct a multistoried building of having 3 units – A, B & C in each floor. You are asked to design for only C unit flat of having 1700 sq-ft (approx.) based on the following specifications:

- 3 Bed room (Size: Bed-1 is 14' x 14', Bed-2 is 14' x 18', Bed-3 is 13' x 15')
- 4 bath (Size: Attached bath of Bed-1 is 4'6" x 6', Attached bath of Bed-2 is 4' x 6', bath of Bed 3 is 4'6" x 6', Common Bath is 5' x 8')
- Living/Drawing (Size: 18' x 18')
- Kitchen (Size: 7' x 5')
- 4 Veranda (Size: Ver_Bed-1, Ver_Bed-2 & Ver_Bed-3 is 4'6" x 6', Ver_Kit is 4' x 5')
- Dining (Remaining free space after completing all the specifications)

Considering the abovementioned specifications do the following using AutoCAD 2007 Software:

i) **Draw the Civil Plan** of the flat along with **stair, lift** and **lobby (Space: 8'**, *which is excluded from the flat size***)**. [*Hints: Brick to interior/exterior Offset distance = 5″, Stair Offset distance = 10″]. **8 points**

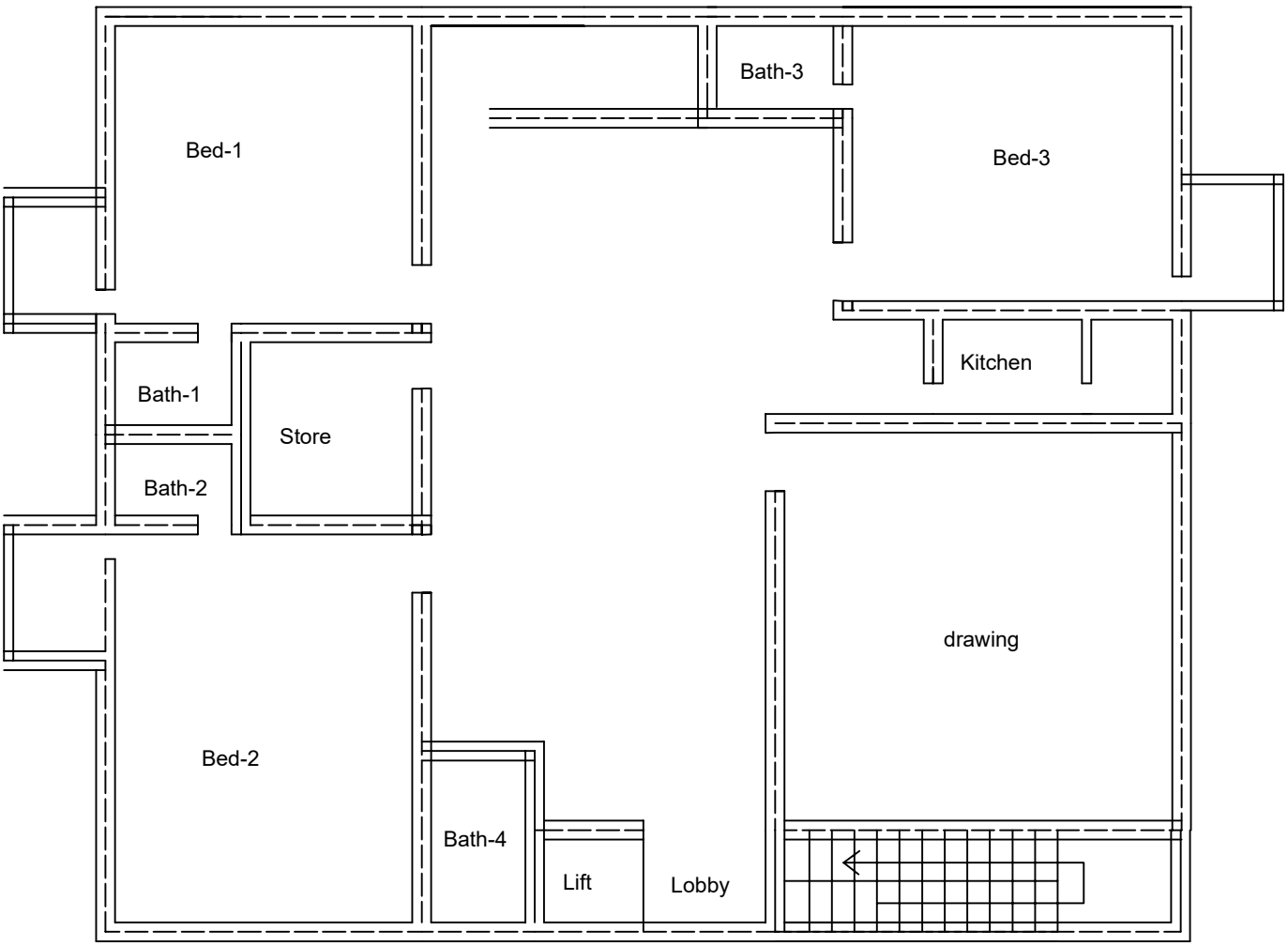
ii) **Draw** the **proper Electric Fittings (applying BNBC)** **3 points**

iii) **Draw** the **electric conduit layout (Wiring – applying BNBC)** where **Red, Blue & Yellow color** represents **light load, medium load & heavy load** respectively. **3 points**

iv) **Calculate** the **load** for **Unit A/B/C** only. Also **Calculate** the **load** for each **floor** and **load for the building** considering all the flat types are same and same types of load. **3 points**

Calculate the **capacity** of the **Generator** based on the load calculation. **Draw** a separate **Generator room** and **show** the connection with distribution board. **3 points**

Shakhawat Hussain Shaon	18-38227-2
Md. Rashel Ahmed	17-35480-3
Hasan, Md. Kamrul	17-35555-3



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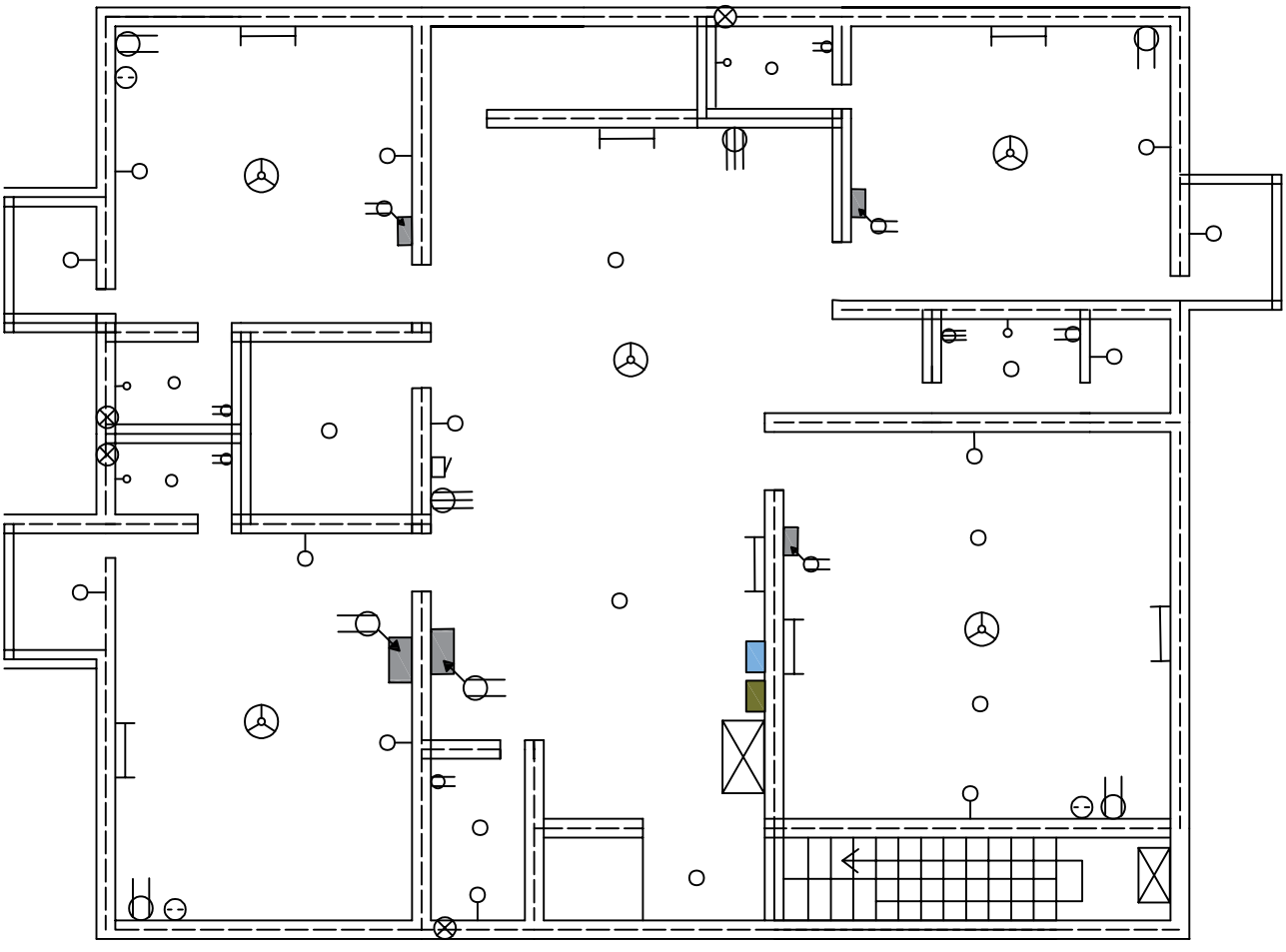

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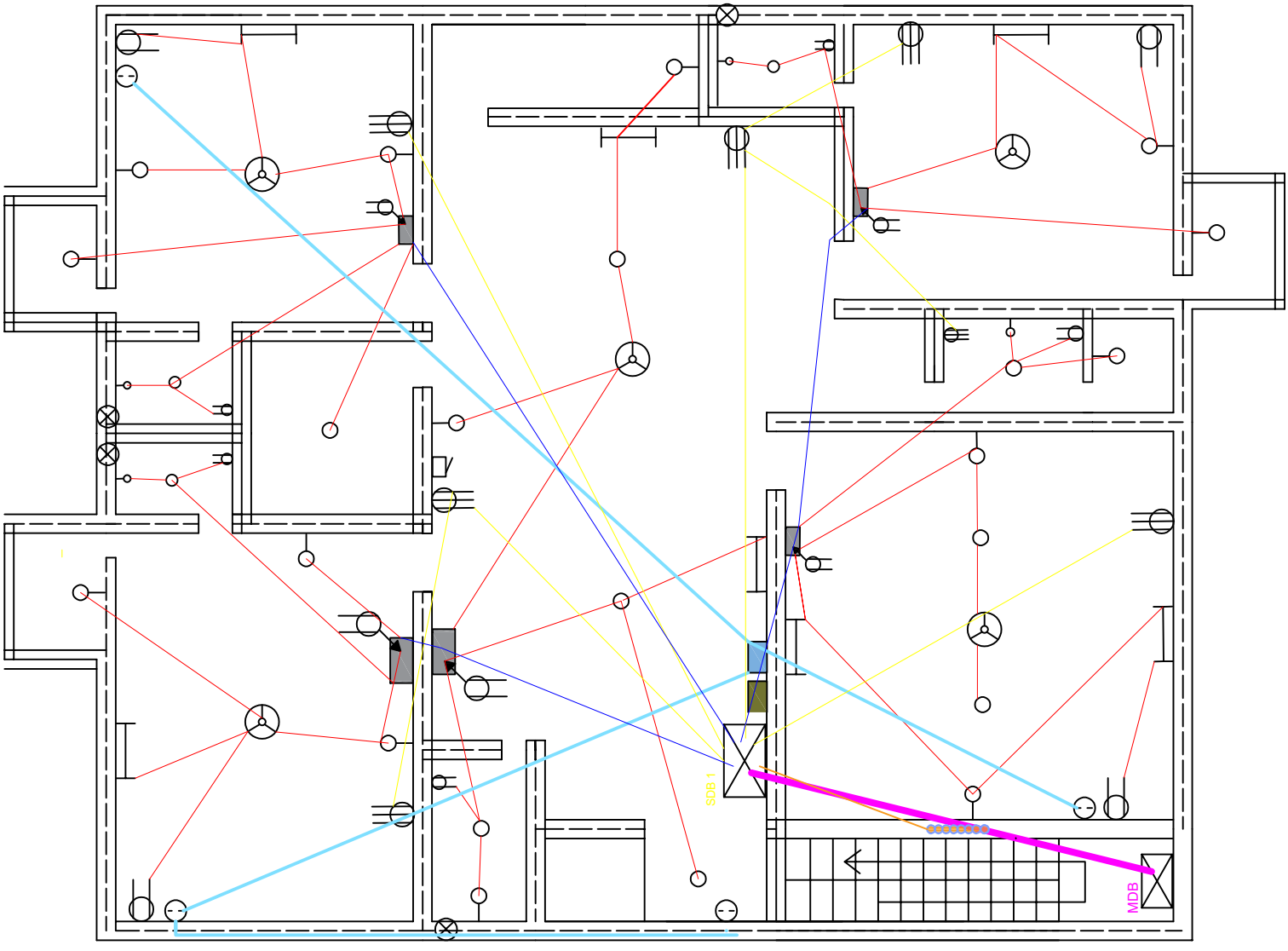

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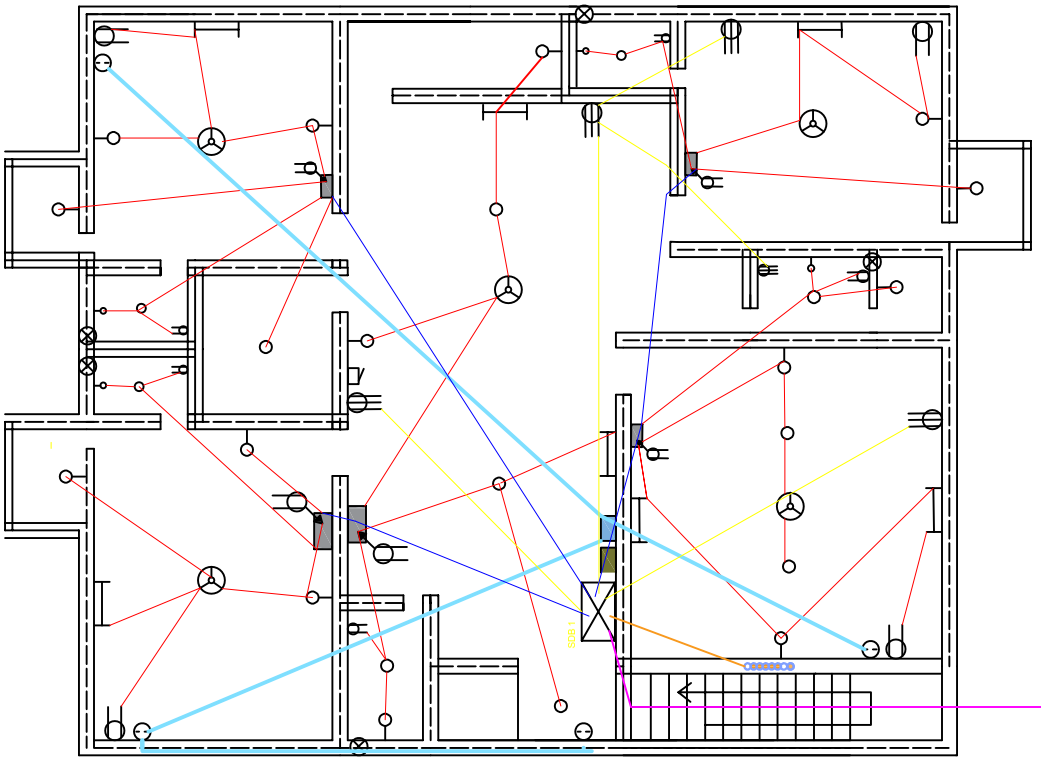
Legends And Power calculation			
Bed Room 1			Power (Watt)
TV4		21" LED Television	150
1*F1		CEILING 4.73 FEET	70
L1,L2		INCANDESCENT Lamp	2*100
T2		FLOURCENT LAMP	400
TS1		5A Socket	200
Bed Room 2			
1*F2		CEILING 4.73 FEET	70
L3,4		INCANDESCENT Lamp	2*100
T3		FLOURCENT LAMP	400
TS2		5A Socket	200
TV2		21" LED Television	150
Bed Room 3			
1*F3		CEILING 4.73 FEET	70
L5		INCANDESCENT Lamp	100
T3		FLOURCENT LAMP	400
TS3		5A Socket	200
15, 1		15A socket	1000
Drawing Area			
F4		CEILING 4.73 FEET	70
15,2			1000
L6,L7		INCANDESCENT Lamp	2*100
T4		FLOURCENT LAMP	400
TS4		5A Socket	200
TV3		21" LED Television	150
ML1,ML2		One kind of Bulb	2*80
Kitchen room			
X1		Exhaust Fan	90
15_3		15 A Socket	1000
L8		INCANDESCENT LAMP	100
TS5		5A Socket	200
e + Table			
L9,L10,L11,L12		INCANDESCENT LAMP	4*100
X2, X3, X4, X5		Exhaust Fan	4*90
TS6,7,8,9		5A Socket	4*200
Dining Room			
1*F5		CEILING 4.73 FEET	70
L13		INCANDESCENT Lamp	100
T4,T5		FLOURCENT LAMP	2*400
15, 4, 15_5		15 A Socket	2*1000
ML3,ML4		One kind of Bulb	2*80
Utility and Store room			
L14		INCANDESCENT Lamp	100
ML5		One kind of Bulb	80
		Total	12890



Notation	Load
For C Unit	12.25 kw
Total 3 Unit with same load A,B,C	3 * 12.25 kw = 36.75 kw
49.76= 24 m^2 258.334 Squre feet	Width = 14' Length = 18'45"