American International University- Bangladesh (AIUB)
Faculty of Engineering (EEE)

Course Name:	COMPUTER AIDED DESIGN AND DRAFTING	**Course Code:**	BAE 2101
Semester:	Summer 2019-2020	**Sec:**	**L**
Faculty:	Raja Rashidul Hasan	**Assignment No:**	**F1**
Assignment Name:	**OBE Assignment**		
Submission Date:	**16-09-2020 (Wednesday)**		
ID	**Student Name**	**Department.**	**Serial No**
19-41289-3	**Saha, Anik Kumar**	**CSE**	**17**
19-41312-3	**Sharna, Shanzida Ahammad**	**CSE**	**18**
19-41322-3	**Ahmed, Raiyan**	**CSE**	**19**
19-41325-3	**Tamim, MD Sibbir Khan**	**EEE**	**20**

*** *Follow the instructions before doing your assignment*

Question # Mr. X & Mrs. Y have purchased a land of 4 Kathas from **SEL Properties Ltd.** which is located at Bashundhara R/A, Dhaka. Now they want to construct a 8 Storied building (**Ground + 7 Floors**) of having 2 units – A & B in each floor. You are asked to design for only A unit flat of having **1400 sq-ft** (approx.) based on the following specifications:

- *2 Bed Room (size: Bed-1 (master Bed) is 12' x 13', Bed-2 is 12' x 13')*
- *3 bath (Size: Attached bath of Bed-2 is 4'6" x 6', bath of Bed-1 is 4'6" x 6', Common Bath is 5' x 6')*
- *Drawing (Size: 16' x 16')*
- *Dining*
- *Kitchen (Size: 7' x 5')*
- *2 Veranda (Size: Ver_Bed-1(master Bed) is 5' x 7', Ver_Kitchen is 4' x 5')*
- *Door for kitchen / bathroom / veranda - 2', Door for Bed Room - 3' and Main Door 4' (interior to interior)*

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′ *x* 8′**, *which is excluded from the flat size*). [*Hints: Brick to interior/exterior Offset distance = 5″, Stair Offset distance = 6″]. **10 points**

ii) **Draw** the **proper Electric Fittings (applying BNBC)** **5 points**

iii) **Draw** the **electric conduit layout (Wiring – applying BNBC)** where **Red, Blue & Yellow color** represents **light load, heavy load, SB to SDB** connections respectively. **5 points**

iv) **Calculate** the **load** for **Unit A** only. Also **Calculate** the **load** for each **floor** and **load for the building** considering all the flat types are same size and same types of load. **5 points**

v) **Calculate** the **capacity** of the **Generator** based on the load calculation. **Draw** a separate **Generator room** and **show** the connection with distribution board. **5 points**

Total: 30 points

(Hints. of V. Consider, each Unit the Load is 10kW. So, the total load of the floor is (2 x 10) =20 kW. Thus, Total load of your Building is (20kW x 7) = 140 kW)

Submission Instruction:

- Do the assignment in a Group (Group is assigned in MID). Do not copy from others.
- Take idea from the Sample Design.
- Write your **Name, ID & Serial no** properly on the above Table
- Also, mansion all of your **Serial no** at top left corner of your design window
- Take Screen shot of your final design by indicating all dimensions properly. Hence, make a pdf by attach this top page.
- Submit both **pdf** and **.dwg** file in a zip
- Zip File Name: GR_00_OBE_F1
- Send your Assignment to: **cadeeecse@gmail.com**

Subject of your Mail: Group No_OBE_Assignment F1

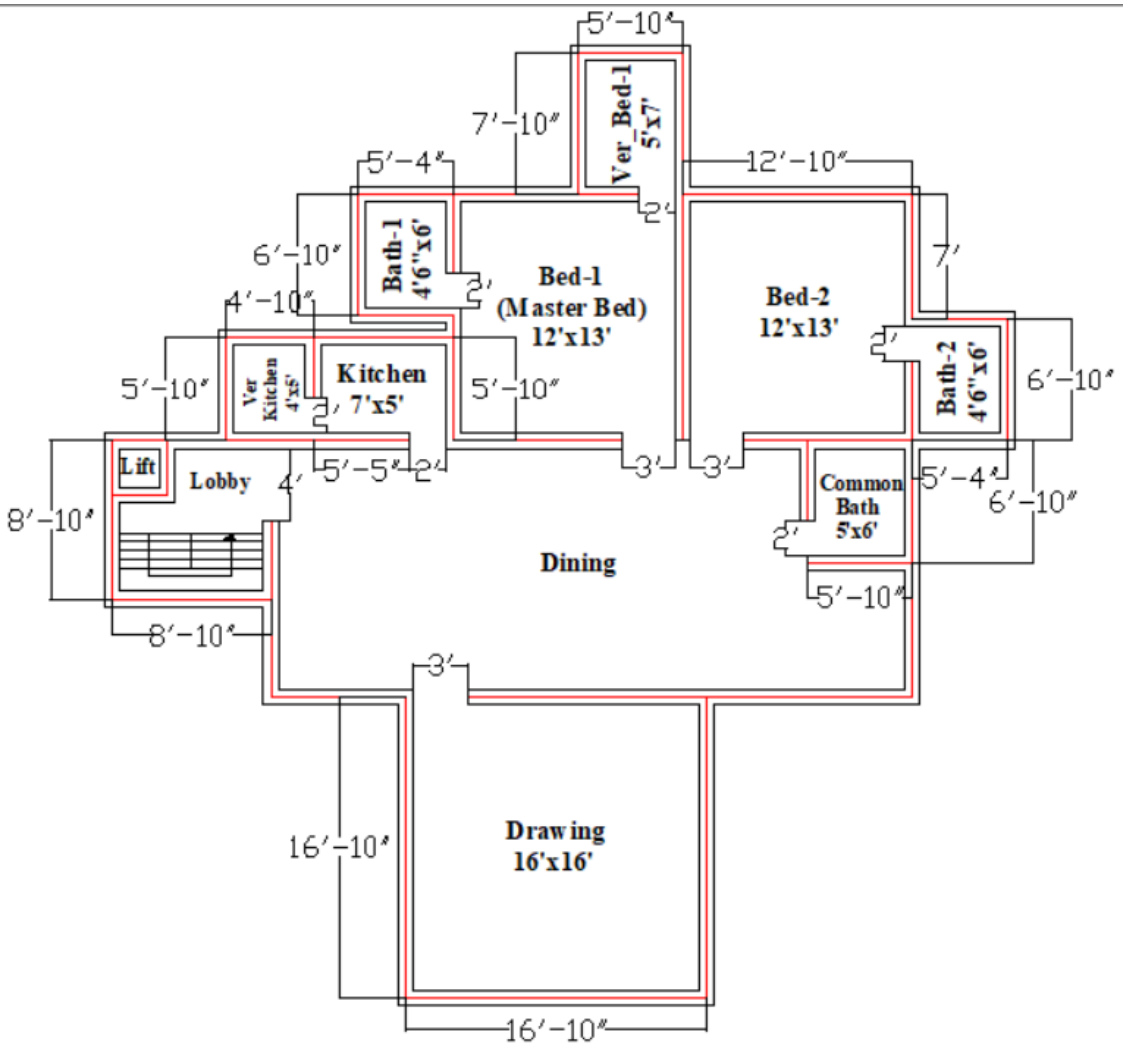

FIG: Civil Plan

Legend

F - Fan (70 watt)

L - Light (100 watt)

T - Tube light (40 watt)

TV - Television

TE - Telephone

M - Motor

CH - Hanging light (150 watt)

CB - Circuit breaker

SB - Switch board

SS - Switch board socket (200 watt)

ST2 - 2 pin socket (200 watt)

ST3 - 3 pin socket (1000 watt)

TJB - Telephone junction board

AJB - Antenna junction board

SDB - Sub distribution board

MDB - Main dictribution board

EF - Exhausted fan (90 watt)

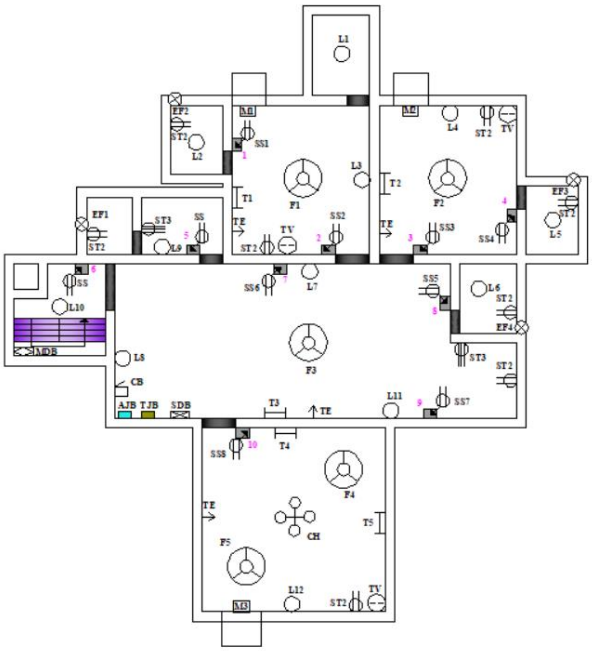

FIG: Electric fittings

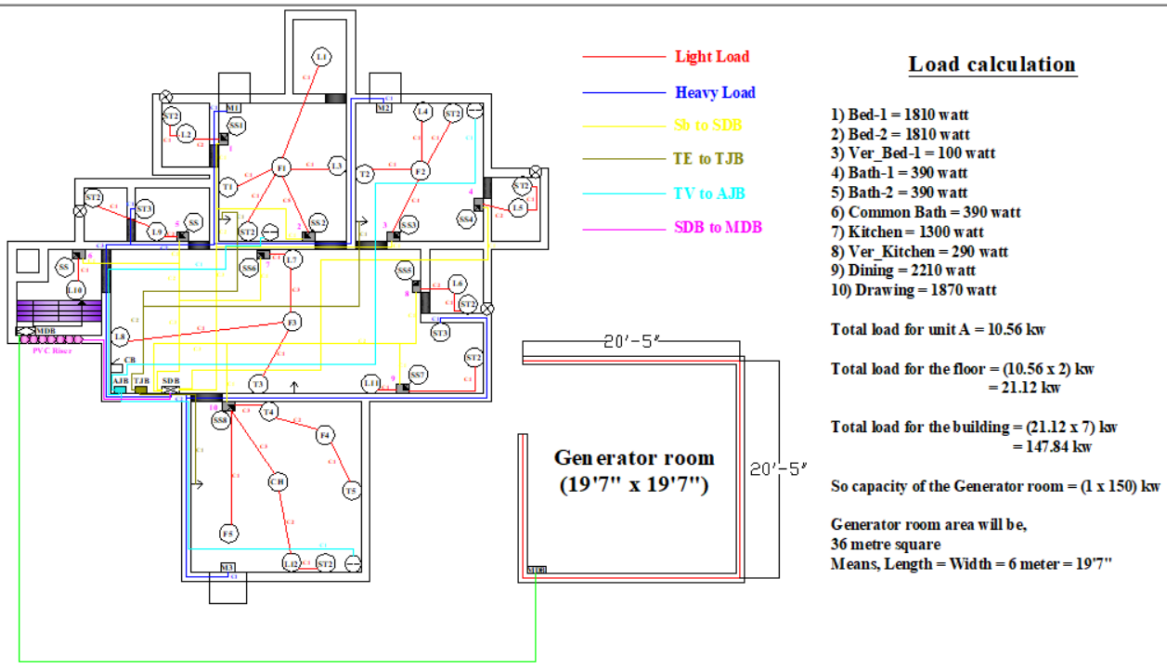

FIG: Conduit Layout