AMERICAN INTERNATIONAL UNIVERSITY – BANGLADESH (AIUB)

Faculty of Engineering

BAE2101: Computer Aided Design and Drafting

Assignment Spring 2020-21 Total Marks: 30 Time: 03 weeks.

Course Instructors: Nafish Sarwar Islam

Question # Mr. X & Mrs. Y have purchased a land of 0 Kathas from **ABC Housing Ltd.** which is located at Bashundhara R/A, Dhaka. Now they want to construct a 0 Storied building (**Ground + 0 Floors**) of having 3/4 units – A, B & C/D in each floor. You are asked to design for only B unit flat of having **0000 sq-ft** (approx.) based on the following specifications:

- *0 Bed Room (size: Bed-1 (master Bed) is 00' x 00'0", Bed-2 is 00' x 00', Bed-3 is 00' x 0'0")*
- *0 bath (Size: Attached bath of Bed-2 is 0'0" x 0', bath of Bed-1 is 0'0" x 0', Common Bath is 0' x 0')*
- *Living/Drawing (Size: 00' x 00')*
- *Dining*
- *Kitchen (Size: 0' x 0')*
- *0 Veranda (Size: Ver_Bed-1 is 0'0" x 0', Ver_Bed-2 is 0'0" x 0', Bed-3 is 0' x 0')*
- *Door for kitchen / bathroom / veranda - 2'6", 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: 00' *x 00'*,** *which is excluded from the flat size*). [*Hints: Brick to interior/exterior Offset distance = 0", Stair Offset distance = 0"]. **10 points**

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

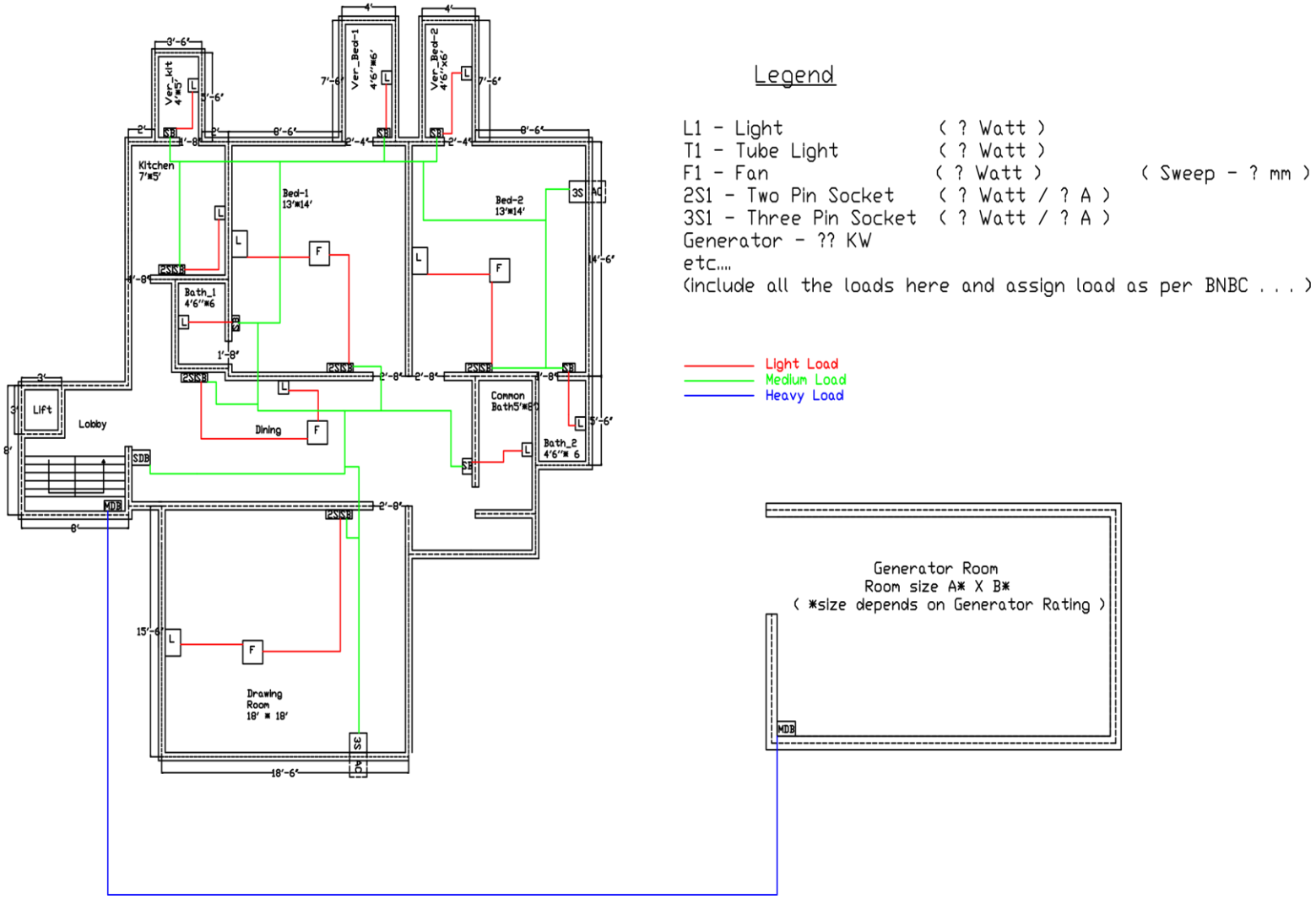
iii) **Draw** the **electric conduit layout (Wiring – applying BNBC)** where **Red, Blue & Yellow color** represents **light load, medium load & heavy load** respectively. **5 points**

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. **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**

*** *You can follow the attached sample but don't take it as reference. Less than 5 % (approx.) of total sft is acceptable.*

Sample Drawing



Load Calculation:

Suppose there are total 5 lights of 40 Watt and 3 Fan of 80 Watt, so total load should be (5 x 40) + (3 x 80) or, 440 Watt. Similarly, include all the loads and calculate the **load** for **one unit**. Then, calculate the **load** for **a floor** just multiplying total loads of one unit with number of units in each floor and calculate **total load** for the **building** just multiplying the number of floors (ignoring ground floor).

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AMERICAN INTERNATIONAL UNIVERSITY – BANGLADESH (AIUB)
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BAE2101: Computer Aided Design and Drafting
Video Presentation Spring 2020-21 Total Marks: 20, Time: 03 weeks.
Course Instructors: Nafish Sarwar Islam

1. Make a **5 to 7** minute power point video presentation on the following topic:

"Civil Plan Designed for ABC Housing Ltd."

2. Upload your video presentation on YouTube (most preferably) or Google drive.

3. Share the link of your uploaded video at the cover page of your 3 assignments.

4. The submission deadline of video presentation is 13 April 2021, 11:59:59 PM.

5. Make sure you have worked absolutely individually on your video presentation.

6. The rubrics given below will be followed to grade your submitted presentation.

Criterion	Allocated Marks	Total Mark
1. Knowledge on the topic	5 mark	5 + 3 + 3 + 3 + 2 + 2 + 1 + 1 = 20
2. Quality of the power point slides	3 mark	
3. Video Quality	3 mark	
4. Audio Quality	3 mark	
5. Pronunciation	2 mark	
6. Expression	2 mark	
7. Attire and Dress	1 mark	
8. Ambient and Environment	1 mark	

7. Duplicating **even 1% of the work** will result in an "F" grade. Asking for mercy or, consideration will result in cancellation of studentship via disciplinary committee.

**** You can follow the attached sample but don't take it as reference. Less than 5 % (approx.) of total sft is acceptable.*