Total No. of Questions : 4]

SEAT No. : ____

PA-1

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[5931]-1
S.E. (Civil Engineering)
201001 : BUILDING TECHNOLOGY AND ARCHITECTURAL PLANNING
(2019 Pattern) (Semester - I)

Time : 1 Hour] ***[Max. Marks : 30***

Instructions to the candidates :

1) ***Attempt Q1 or Q2 and Q3 or Q4.***
2) ***Figures to the right indicate full marks.***
3) ***Draw neat figures wherever necessary.***
4) ***Assume necessary data.***
5) ***Use of scientific calculator is allowed.***

Q1) a) Write short note on : Need of Construction Automation and its Benefits. **[5]**

b) Differentiate between : **[5]**

i) English bond vs Flemish bond

ii) Stone masonry vs brick masonry

c) Explain casting procedure for reinforced concrete columns. **[5]**

OR

Q2) a) Write short note on : Slip form work **[5]**

b) Differentiate between : **[5]**

i) Formwork vs scaffolding

ii) Underpinning vs formwork

c) List out types of building as per National Building. **[5]**

Q3) a) Illustrate shortly following Architectural principals. **[5]**

i) Unity

ii) Accentuation

iii) Mass composition

P.T.O.

b) Distinguish between : **[5]**

i) Aspect vs Prospect

ii) Grouping vs Circulation

c) On a plot size 45m × 55m, the shorter side is facing the main road. The side margins are as follows : Front margin - 5.5m, rear and side margins are all 2m; Earlier FSI allowed was 1.5. However, only ground storied construction after leaving the margins was built by the owner. Now, as per the new norms, FSI allowed is increased to 2.5. If 2 more storeys are proposed by the owner. Determine the additional area to be built on each floor. **[5]**

OR

Q4) a) Illustrate shortly following Architectural principals. **[5]**

i) Proportion

ii) Contrast

iii) Rhythm

b) Distinguish between : **[5]**

i) Building Planning principals and Building bye laws

ii) Built up area vs carpet area

c) A plot owner proposed G + 1 construction with 240 m^2 construction on each floor, on a plot of size is 20m × 30m. If all margins are 2m and F.S.I. allowed - 1. Find : i) Ground coverage ii) FSI Consumed iii) Whether plan will be sanctioned or not. iv) If not, by how much amount the proposed area will be required to be minimize by the owner, so that the proposal will be sanctioned by the authorities. **[5]**