

EXERCISE 3

DESIGN AND DETAILING

Relevant codes: IS 456, IS 800, IS 875(I,II,III), IS 1893(I), IS 13920, SP 16, SP 34
Last date of submission: 08 Nov 2019

PART A: STEEL STRUCTURE (REF. EXERCISE 1)

(Total marks = 10 report + viva)

For the steel structure analysed using STAAD in Exercise 1, please carry out design and detailing of following components manually (with drawings), based on the force summary tables generated by you:

- (a) One pile cap
- (b) One steel column.
- (c) Steel column base connection (in case of fixed base)
or one beam-column joint (in case of hinged base)

Submission:

Hand calculations acceptable. However, drawings should be drawn using computer interface.

PART B: RC STRUCTURE (REF. EXERCISE 2)

(Total marks = 10 report + viva)

For the steel structure analysed using STAAD in Exercise 2, please carry out design and detailing of following components manually (with drawings), based on the force summary tables generated by you:

- (a) One footing.
- (b) One complete column from footing to first floor.
- (c) One continuous beam from one end of the building to other.

Submission:

Hand calculations acceptable. However, drawings should be drawn using computer interface.

NOTE: SEPARATE SUBMISSIONS FOR PART A AND B