

Total No. of Questions :6]

SEAT No. :

P38

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Oct./ TE/ Insem. - 152

T.E. (Civil)

**INFRASTRUCTURE ENGINEERING &
CONSTRUCTION TECHNIQUES
(2015 Course) (Semester - I) (301002)**

Time : 1 Hour]

[Max. Marks :30

Instructions to the candidates:

- 1) *Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6.*
- 2) *Figures to the right indicate full marks.*
- 3) *Assume suitable data, if necessary.*
- 4) *Use of electronic pocket calculator is allowed in the examination.*
- 5) *Use of cell phone is prohibited in the examination hall.*

Q1) a) Explain in brief advantages and disadvantages of concrete sleepers. [5]

b) Explain salient features of smart city. [5]

OR

Q2) a) Explain coning of wheels and its importance with the help of a neat sketch. [5]

b) Write a short note on metro rails. [5]

Q3) a) Discuss in brief different methods to reduce the wearing of rails. [6]

b) Define the following [4]

Equilibrium speed;

Equilibrium cant;

Cant excess;

Cant deficiency.

OR

P.T.O.

- Q4)** a) Enlist with a neat sketch all elements of a crossing. [6]
b) Explain any 4 types of curves. [4]

- Q5)** a) List out various dredging systems. Explain any 1 with a neat sketch. [5]
b) Enlist types of barges explain any two. [5]

OR

- Q6)** a) What are the various methods of dewatering systems? Explain any one method with a neat sketch. [5]
b) What is a diaphragm wall? State its purposes. [5]