SUBJECT: Basic Civil Engineering

Part-I

Q1 Answer the following questions: (2 x 10)

a) State the importance of Civil Engineering.

b) Write the standard size of bricks as per BIS.

c) Name different components of a building.

d) What is mortar?State different types of mortar.

e) What is surveying?

f) Define for bearing and back bearing of a line.

g) What is foundation?

h) What is Irrigation Engineering?

i) State names of different hydraulic structures.

j) Write the basic objective of traffic engineering.

Part-II

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 × 8)

a) Briefly explain about the broad disciplines of Civil Engineering.

b) Enumerate the qualities of good bricks.

c) Briefly explain about classification of stones.

d) Define and briefly explain workability of concrete.

e) Mention the properties of good mortar.

f) When is chain survey recommended? Mention the principle of chain surveying.

g) What is local attraction? How it is detected and adjusted?

h) What is total station? State the fundamental quantities measured by a total station.

i) Develop a typical layout of an irrigation canal system.

j) Describe the classification of soil as per Indian standard.

k) Write different advantages and disadvantages of irrigation.

l) State the planning and design aspects of transportation engineering

Part-III

Only Long Answer Type Questions (Answer Any Two out of Four)

Q3 Enumerate the different laboratory tests for cement and describe any two of them in details. (16)

Q4 The following are the observed bearings of the lines of a traverse ABCDEA with a compass in a place where local attraction was suspected.

Line	**FB**	**BB**
AB	191˚45'	13˚0'
BC	39˚30'	222˚30'
CD	22˚15'	200˚30'
DE	242˚45'	62˚45'
EA	330˚15'	147˚45'

At what stations do you suspect local attraction? Find the correct bearings of the lines also compute the included angles. (16)

Q5 Discuss various functions served by foundation. Explain different types of foundations with figures. (16)

Q6 a) State advantages and disadvantages of brick masonry over stone masonry. (8x2)

b) Explain about different modes of transport.