

[Time: 3 Hours]

[Total Marks: 80]

**N.B:** 1. Question No:1 is compulsory

2. Attempt **any three** questions from the remaining **five** questions.
3. Figures to the right indicates full marks

- Q1 (20)
- a Classify the following equipments as Standard & Special Equipment :  
Conventional Concrete Mixer, Tunnel boring Machine, Platform Vibrator, Air Compressor, Tower crane, Concrete placing boom, Scraper, Wheel trencher.
- b Discuss the advantages offered by Equipments over labourers.
- c Draw a neat sketch/flowchart showing the components of an Atomic power plant.
- d List the equipments required for Concrete dam construction.
- Q2 (20)
- a With the help of a sketch, explain the working of Vertical shaft sinking machine. 10
- b Enlist the various dewatering technique for trenches and explain the working of well point system. 10
- Q3 (20)
- a Draw neat labelled sketch for : i) Jaw Crusher ii) Tower Crane 10
- b How does LIDAR technique work ? State its applications in Civil Engg. 10
- Q4 (20)
- a Describe the working of Tunnel lining trolley. 10
- b Enlist the advantages offered by Slip formwork. 05
- c What care should be taken during transportation and storing of blasting materials ? 05
- Q5
- a Explain balanced cantilever method of bridge construction. 08
- b Discuss any two methods of controlled demolition of buildings. 07
- c Describe the various types of construction involved in setting up a fuel station. 05
- Q6 (20)
- a Discuss the role of drones and GPS for monitoring the construction progress of infrastructure projects. 10
- b Describe the EM system of Maglev. 05
- c State the advantages of prefabricated housing system. 05