

23428

**M. Tech. (Specialization in Structural Design)
2nd Semester Examination, May-2015**

CONSTRUCTION FAILURES

Paper-MTSD-210

Time allowed : 3 hours]

[Maximum marks : 100

Note : Attempt any five questions. All questions carry equal marks.

1. (a) What is the meaning of construction failure ? Explain it with the help of some historical references. 10
- (b) Explain the main causes of failure that leads to the construction failure. 10
2. How the following leads to construction failure, explain in detail : 20
 - (a) Inadequate supervision and inspection.
 - (b) Subsidence of foundations.
 - (c) Earthquake.
3. How impermeable is concrete ? What parameter affects the permeability of concrete ? How does the micro structure of concrete affect the durability of structure ? 20
4. What are the codal provisions for the design of durable concrete structures as per Indian Standard ? How the sulphate attack be minimized ? 20

5. What are the reasons for the cracking of concrete and masonry structure ? Explain with the help of neat and clean sketches. 20
6. Explain the measures adopted in order to reduce or to avoid the cracks in concrete structures. 20
7. What are the professional and legal responsibilities to be adopted during the construction ? 20
8. What are the measures which help to reduce the frequency and severity of construction failures ? 20