

Dec.-22-1360

MCE-101 (Advanced Technical in Concrete Construction)

M.Tech. 1st (CE) (CBCS)

Time : 3 Hours

Max. Marks : 60

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt five questions in all by selecting one from each of the section A, B, C and D. Section E is compulsory.

SECTION - A

1. What is high strength concrete? Explain application of high strength concrete. (10)
2. Design M30 grade of concrete by IS code using pozzolanic materials. (10)

SECTION - B

3. What is curing? Explain types of curing with neat diagram. (10)
4. What is self-curing concrete? Explain procedure of preparation of self-curing concrete. (10)

SECTION - C

5. Explain procedures of construction of R.C.C. columns. (10)
6. What is special shuttering? Explain requirement of special shuttering for lining of tunnel. (10)

SECTION - D

7. What is pre-stressed concrete? Explain construction of pre-stressed concrete. (10)

8. Explain safety in concrete construction. (10)

SECTION - E

9. Attempt all the following:
 - (a) What is pozzolanic materials?
 - (b) What are the methods of transportation for concrete?
 - (c) What is shotcrete?
 - (d) What is previous concrete?
 - (e) What is formwork?
 - (f) What is lining of tunnel?
 - (g) What are the tools required in pre-stressed concrete construction?
 - (h) What is quality control in concrete construction?
 - (i) What is BIS?
 - (j) What is fresh concrete? (10×2=20)