Before answering the question paper the candidate should ensure that they have been supplied the correct question paper. Complaints in this regard, if any, shall not be entertained after the examination.

**Note:** Question No. 1 is Compulsory and attempt two questions from each section. All questions carry equal marks.

**SECTION – A**

Q 1. (a) Define concrete?
   (b) Write down the chemical composition of cement?
   (c) What does the consistency of concrete mean?
   (d) Define mix design in concrete?
   (e) Define the compressive strength of concrete?  
   [4x5=20]

Q 2. (a) Discuss Mix Design and its various types?
   (b) Explain the requirements of concrete mix design?  
   [2x10=20]

Q 3. (a) Explain the Bulking of fine aggregate?
   (b) Describe the properties of concrete  
   [2x10=20]

Q 4 Write short notes on the topic mentioned below:-
   (a) Batching of aggregate (b) Batching of cement (c) Curing of concrete (d) Concrete Repair Methods.  
   [4x5=20]

**SECTION – B**

Q 5. (a) Write down the physical properties of cement?  
   (b) Discuss the creep of concrete?  
   [2X10=20]

Q 6. (a) Explain the shrinkage in concrete?
   (b) Discuss in detail the factors of workability?  
   [2X10=20]

Q 7 Write short notes on the topic mentioned below:-
   (a) Cold Weathering Concrete (b) Hot weathering concrete (c) Flyash (d) Polymer Concrete  
   [4X5=20]